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TRANSACTIONS

OF THE

PATHOLOGICAL SOCIETY OF LONDON.

VOLUME FOURTEENTH.

COMPRISING THE REPORT OF THE PROCEEDINGS FOR THE SESSION 1862-63.

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The present publication, being the Fourteenth Volume of Transactions, constitutes the seventeenth published Annual Report of the Pathological Society's proceedings.

The Council think it right to repeat, that the exhibitors are alone responsible for the descriptions given of the Specimens exhibited by them, the only change made in the Reports furnished by the authors being such verbal alterations as were absolutely necessary.

53, Berners Street, Oxford Street,
September, 1863.

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OF THE

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*** *Members are requested to indicate to the Secretaries corrections when necessary.*

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Rokitansky, Carl, M.D., Professor of Pathological Anatomy in the University of Vienna.

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(C.) Present Members of Council.

* Former Members of Council.

† Have paid Composition Fee for Annual Subscriptions.

‡ Have paid Composition Fee for Transactions.

GENERAL LIST OF MEMBERS.

Elected Session

1858-59 Acland, Henry Wentworth, M.D., F.R.S., Physician to the Radcliffe Infirmary, Oxford.

**Orig. Memb.* Adams, William, Esq., Surgeon to the Royal Orthopædic Hospital, 5, Henrietta-street, Cavendish-square.

1858-59 Adams, William, Esq., 37, Harrington-square.

1847-48 Aikin, Charles A., 7, Clifton-place, Sussex-square, Hyde-park.

1857-58 Alison, S. Scott, M.D., Physician to the Hospital for Consumption, Brompton, and Physician to the Scottish Hospital, 80, Park-street, Grosvenor-square.

1859-60 Andrew, Edwyn, M.D., Windsor-house, Shrewsbury.

1862-63 Andrew, James, M.B., Warden of the College, St. Bartholomew's Hospital.

1857-58 Anstie, Francis E., M.D., Assistant-Physician to the Westminster Hospital, 15, Onslow-square, Brompton.

**Orig. Memb.* Arnott, James Moncrieff, Esq., F.R.S. (formerly President), 2, New Burlington-street.

1851-52 Ashton, T. J., Esq., 31, Cavendish-square.

1857-58 Avent, Nicholas, Esq., Modbury, Devonshire.

Elected Session

Orig. Memb. Babington, Benjamin Guy, M.D., F.R,S. (formerly President), 31, George-street, Hanover-square.

1856-57 Balding, Daniel Barley, Esq., Royston, Herts.

*1849-50 Ballard, Thomas, M.D., 10, Southwick-place, Hyde-park.

*1851-52 Barclay, A. Whyte, M.D., Physician to St. George's Hospital, 23A, Bruton-street, Berkeley-square.

1860-61 Barker, Edgar, Esq., Jun., 5, Albion-place, Hyde-park.

1855-56 Barker, T. A., M.D. (C.), Senior Physician to St. Thomas's Hospital, 27, Wimpole-street.

Orig. Memb. Barker, Thomas Herbert, M.D., Harpur-place, Bedford.

Orig. Memb. Barlow, George Hilaro, M.D., (late V.P.), Physician to Guy's Hospital, 5, Union-street, Southwark.

1852-53 Bartlett, William, Esq., Surgeon to the Kensington Dispensary, Ladbroke Lodge, Ladbroke-square, Notting-hill.

1862-63 Barratt, Joseph Gillman, Esq., 22, Cleveland-gardens, Bayswater,

1852-53 Barwell, Richard, Esq. (C.), Assistant-Surgeon to the Charing Cross Hospital, 22, Old Burlington-street.

1857-58 Basham, William R., M.D., Senior Physician to the Westminster Hospital, 17, Chester-street, Grosvenor-place.

1861-62 Bastian, H. C., Esq., M.A., 14, Burton-crescent.

*1851-52 Beale, Lionel S., M.B., F.R.S. Physician to King's College Hospital, 61, Grosvenor-street.

1855-56 Bealey, Adam, M.D., M.A., 27, Tavistock-square.

1852-53 Beck, Thomas Snow, M.D., F.R.S., 9A, Langham-place.

*1849-50 Beith, Robert, M.D., Deputy Inspector-General of Jamaica Hospitals.

1862-63 Bell, James, Esq., 30, Margaret-street, Cavendish-square.

1846-47 Bennet, James Henry, M.D., Physician-Accoucheur to the Royal Free Hospital, Weybridge, Surrey.

Orig. Memb. Bennett, James Risdon, M.D. (formerly V.P.), Physician to St. Thomas's Hospital and to the City of London Hospital for Diseases of the Chest, 15, Finsbury-Square.

‡1856-57 Bickersteth, Edward R., Esq., Surgeon to the Liverpool Royal Infirmary, 2, Rodney-street, Liverpool.

*1848-49 Bird, James, M.D., 27, Hyde-park-square.

1855-56 Bird, W., Esq., Surgeon to the West London Hospital, 7, George-street, Hanover-square.

*1849-50 Birkett, Edmund Lloyd, M.D., Physician to the City of London Hospital for Diseases of the Chest, 48, Russell-square.

Orig. Memb. Birkett, John, Esq., (late V.P.), Surgeon to Guy's Hospital, 59, Green-street, Grosvenor-square.

1853-54 Black, Cornelius, M.D., Physician to the Chesterfield Dispensary, St. Mary's-gate, Chesterfield.

1849-50 Blagden, Robert, Esq., Stroud, Gloucestershire.

1859-60 Bloomenthal, Theodore, Esq.,

1861-62 Bower, Richard Norris, Esq., 14, Doughty-street, Mecklenburg-square.

*1850-51 Bowman, William, Esq., F.R.S., Surgeon to the Royal Ophthalmic Hospital, 5, Clifford-street.

Elected Session

1862-63 Braine, Francis Woodham, Esq., 44, Hertford-street, May-fair.

*1846-47 Brinton, William, M.D., Physician to St. Thomas's Hospital, 24, Brook-street, Grosvenor-square.

1856-57 Briscoe, John, Esq., 12, Broad-street, Oxford.

†*1850-51 Bristowe, John S., M.D. (Hon. Secretary), Physician to St. Thomas's Hospital, 2, Queen-square, Westminster.

1859-60 Broadbent, William Henry, M.B. Lond., Assistant-Physician to the London Fever Hospital, and Physician to the Western General Dispensary, 23, Upper Seymour-street, Portman-square.

1851-52 Brodhurst, Bernard E., Esq., (C.) Assistant-Surgeon to St. George's Hospital, and to the Royal Orthopædic Hospital, 20, Grosvenor-street.

*1846-47 Brooke, Charles, M.B., F.R.S., Surgeon to the Westminster Hospital, 16, Fitzroy-square.

**Orig. Memb.* Browne, Joseph Hullett, M.D., Physician to the St. Pancras Royal General Dispensary, 55, Gordon-square.

1854-55 Browne, Robert Cave, M.D., Armley-lodge, Barnet, Herts.

1859-60 Browning, Charles, M.D., 52, Portsdown-road, Maida-hill.

1859-60 Browning, George, M.D., 10, St. Stephen's-crescent, Westbourne-park.

1855-56 Bryant, Thomas, Esq., (C.), Assistant-Surgeon to Guy's Hospital, 2, Finsbury-square.

1854-55 Buchanan, George, M.D., Physician to the London Fever Hospital, and to the Hospital for Sick Children, 75, Gower-street, Bedford-square.

1861-62 Buchanan, Albert, M.B. Lond., 11A, Myddleton-square.

1858-59 Buckland, Francis, Esq., Surgeon to the 2nd. Regiment of Life Guards, Windsor, (Knightsbridge Barracks).

1858-59 Budd, George, M.D., F.R.S. (C.), 20, Dover-street, Piccadilly.

1850-51 Bullock, Henry, Esq., 61, Cumberland-street, Bryanston-square.

1859-60 Burton, Alfred, Esq., 13, Dover-street, Piccadilly.

1852-53 Burton, John M., Esq., Lee-park, Blackheath.

**Orig. Memb.* Busk, George, Esq., F.R.S. (late V.P.), Surgeon to the Seamen's Hospital-ship, "Dreadnought," 15, Harley-street, Cavendish-square.

*1856-57 Buzzard, Thomas, M.B., 41, Great Marlborough-street.

1856-57 Callender, G. W., Esq., Assistant-Surgeon to St. Bartholomew's Hospital, 47, Queen Anne-sreet, Cavendish-square.

1862-63 Campbell, Charles, M.D., Kingston, Jamaica.

†**Orig. Memb.* Camps, William, M.D., 40, Park-street, Grosvenor-square.

*1849-50 Canton, Edwin, Esq., Surgeon to the Charing Cross Hospital, 30, Montague-place, Russell-square.

‡1854-55 Carpenter, Alfred, M.D., High-street, Croydon,

1848-49 Carpenter, William Guest, Esq., Amersham, Bucks.

1861-62 Carr, William, Esq., F.R.C.S., Lee, Blackheath.

1855-56 Carter, H. V., M.D., Professor of Anatomy and Physiology, Grant Medical College, Bombay.

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Elected Session

Orig. Memb. Chevers, Norman, M.D., India.

‡1858-59 Child, Gilbert W., M.D., Physician to the Radcliffe Infirmary, 61, St. Giles', Oxford.

1851-52 Childs, George Borlase, Esq., Surgeon to the Metropolitan Free Hospital, and to the City Police Force, 11, Finsbury-place south.

1854-55 Cholmeley, William, M.D., Physician to the Great Northern Hospital, 40, Russell-square.

1851-52 Chowne, William D., M.D. (C.), Physician to the Charing Cross Hospital, 8, Connaught-place west, Hyde-park.

1860-61 Clapton, Edward, M.D., 4, St. Thomas's-street, Southwark.

1853-54 Clark, Andrew, M.D. (C.), Assistant-Physician to the London Hospital, 23, Montague-place, Russell-square.

*1849-50 Clarke, John, Esq., L.R.C.P., Physician-Accoucheur to the British Lying-in-Hospital, and to the General Lying-in-Hospital, 42, Hertford-street, May-fair

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1857-58 Cockerton, Richard, Esq., Surgeon to the Kensington Dispensary, 12, Petersham-terrace, Gloucester-road, South Kensington.

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*1850-51 Cooper, William White, Esq., Consulting Ophthalmic Surgeon to St. Mary's Hospital, 19, Berkeley-square.

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†1861-62 Couper, John, Esq., Assistant-Surgeon to the London Hospital, 33, Finsbury-circus.

1852-53 Cousins, Edward, Esq., 49, Camden-road-villas, Camden-town.

Orig. Memb. Crisp, Edwards, M.D., 278, King's-road, Chelsea.

*1848-49 Critchett, George, Esq., Surgeon to the Royal London Ophthalmic Hospital, Moorfields, 75, Harley-street.

1855-56 Croft, John, Esq., Surgeon to the Surrey Dispensary, 4, St. Thomas's-street, Southwark.

1860-61 Crosby, Thomas Boor, Esq., 23, Finsbury-place.

1853-54 Cross, Robert, M.D., Physician to the Brewer's-court Dispensary, 20, New-street, Spring-gardens.

1857-58 Cumberbatch, Laurence T., Esq., 25, Cadogan-place, Sloane-street.

Elected Session

1854-55 Curgenven, J. Brendon, Esq., 11, Craven-hill-gardens, Bayswater.

*1854-55 Curling, Thomas Blizard, Esq., F.R.S., Surgeon to the London Hospital, and Examiner in Surgery at the University of London, 39, Grosvenor-street

Orig. Memb. Davies, Herbert, M.D., Consulting Physician to the Infirmary for Asthma, &c., and Physician to the London Hospital, 23, Finsbury-square.

*1846-47 Davis, John Hall, M.D., Physician Accoucheur to the Middlesex Hospital, and to the Royal Maternity Charity, 11, Harley-street, Cavendish-square.

‡1859-60 Davis, Francis William, Esq., R.N., 11 and 12, Love-lane, Aldermanbury.

Orig. Memb. Day, George E., M.D., F.R.S., Chandos Professor of Anatomy in the University of St. Andrews.

1857-58 Delima, Teofilo, M.D., Caracas, South America.

1851-52 Devenish, Samuel Weston, M.B., 7, Billiter-square.

1862-63 Devereux, Daniel, Esq., the Middlesex Hospital.

1861-62 Diamond, W. H., L.R.C.P. Edinb., Resident-Physician of the Lunatic Asylum, Brixton.

1855-56 Dick, H., M.D., 59, Wimpole-street, Cavendish-square.

1858-59 Dickinson, W. H., M.D., Curator of the Pathological Museum at St. George's Hospital, and Assistant-Physician to the Hospital for Sick Children, 11, Chesterfield-street, May-fair.

Orig. Memb. Dixon, James Esq. (late V.P.), Surgeon to the Royal Ophthalmic Hospital, Moorfields, 2, Portman square.

1846-47 Dudgeon, Robert E., M.D., 82, Gloucester-place, Portman-square.

1851-52 Duff, George, M.D., High-street, Elgin.

1860-61 Dunn, Robert William, Esq., 31, Norfolk-street, Strand.

1858-59 Durham, Arthur Edward, Esq., Assistant-surgeon to Guy's Hospital, 30, Brook-street, Grosvenor-square.

1848-49 Eden, Thomas E., Esq., Surgeon-Dentist to the Farringdon General Dispensary, 45, Threadneedle-street.

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1846-47 Ellis, Joseph, Esq., Sudbrook-park, Richmond, Surrey.

*1846-47 Erichsen, John, Esq., (V.P.), Surgeon to University College Hospital, 6, Cavendish-place, Cavendish-square.

1853-54 Evans, Conway, M.D., Assistant-Physician to King's College Hospital, and Physician to the Public Dispensary, Lincoln's-inn.

‡1858-59 Ewens, John, Esq., Milton-Abbas, Blandford, Dorset.

1861-62 Farquharson, Robert, M.D., Assistant-Surgeon, Coldstream Guards.

*1847-48 Fergusson, William, Esq., F.R.S. (formerly V. P., late President), Surgeon to King's College Hospital, 16, George-street, Hanover-square.

Elected Session

*1846-47 Fincham, George T., M.D., Physician to the Westminster Hospital, 2, Eccleston-terrace south, Eccleston-square,

1853-54 Fisher, W. Webster, M.D., Downing Professor of Medicine, Cambridge.

1859-60 Fisher, Alexander, M.D., Assistant-Surgeon, R.N., Her Majesty's ship "Dragon," Chatham.

1855-56 Flower, William H., Esq., (C.), Conservator of the Museum, Royal College of Surgeons, Lincoln's-inn Fields.

1851-52 Forbes, J. Gregory, Esq. (C.), Surgeon to the Metropolitan Convalescent Institution, 9, Devonport-street, Hyde-park.

1849-50 Foreman, Robert Clifton, M.D., Resident Physician to the Asylum for Imbecile Children of the Upper Classes, Church-hill House, Brighton.

†**Orig. Memb.* Forster, John Cooper, Esq., Assistant-Surgeon to Guy's Hospital, Surgeon to the Royal Infirmary for Children, 10, St. Thomas's-street, Southwark.

1859-60 Foster, Michael, Jun., M.D., Huntingdon.

1862-63 Fox, Wilson, M.D., Assistant-Physician to University College Hospital, 22B, Cavendish-square.

1858-59 Francis, Charles Richard, M.B., Bengal Medical Establishment, Indian Army.

1853-54 Freeman, William Henry, Esq., 21, Spring-Gardens.

Orig. Memb. Frere, J. C., Esq., Trinity College, Cambridge.

*1846-47 Fuller, Henry W., M.D., Physician to St. Georges's Hospital, 13, Manchester-square.

‡1858-59 Gairdner, William Tennant, M.D., Physician to the Royal Infirmary, 45, Northumberland-street, Edinburgh.

1860-61 Galton, Robert Cameron, M.D. Camb., 48, Harley-street.

1855-56 Gamgee, Joseph Sampson, Esq., Surgeon to the Queen's Hospital, Birmingham, 20, Broad-street, Birmingham.

1855-56 Gamgee, J., Esq., New Veterinary College, Edinburgh.

1850-51 Garrett, Mark Brown, Esq., 3, New-road, St. George's East.

*1846-47 Garrod, Alfred Baring, M.D., F.R.S., (V.P.), Physician to King's College Hospital, 84, Harley-street, Cavendish-square.

1858-59 Gascoyen, George Green, Esq., Surgeon to the Lock Hospital, and Assistant-Surgeon to, and Lecturer on Anatomy, at St. Mary's Hospital, 48, Queen Anne-street, Cavendish-square.

1855-56 Gaskoin, George, Esq., 3, Westbourne-park, Paddington.

**Orig. Memb.* Gay, John, Esq., Senior Surgeon to the Great Northern Hospital, King's-Cross, 10, Finsbury-place, South.

1854-55 Gibb, George Duncan, M.D., F.G.S., (C.), Assistant-Physician to the Westminster Hospital, and Physician to the West London Hospital, 19A, Portman-street, Portman-square.

1853-54 Gibbon, Septimus, M.D., 3, Finsbury-square.

‡1857-58 Godfrey, Benjamin, M.D., Carlton-house, Enfield.

1854-55 Goodfellow, Stephen Jennings, M.D. (C.), Physician to the Middlesex Hospital, 5, Savile-row, Burlington-gardens.

Elected Session

1856-57 Goolden, R. H., M.D., Physician to St. Thomas's Hospital, 41, Sussex-gardens, Hyde-park.

1857-58 Gowlland, Peter Y., Esq., 34, Finsbury-square.

1846-47 Gream, George T., M.D., 2, Upper Brook-street, Grosvenor-square.

1856-57 Greenhalgh, Robert, M.D., Physician-Accoucheur to St. Bartholomew's Hospital, Physician to the Samaritan Free Hospital for Women and Children, 76, Grosvenor-street.

‡1854-55 Greenhill, William Alexander, M.D., Carlisle-parade, Hastings.

1860-61 Gueneau de Mussy, Henri, M.D., 4, Cavendish-place, Regent-street.

1858-59 Gunn, Theophilus Miller, Esq., 40, York-place, Portman-square.

1851-52 Hacon, E. Dennis, Esq., Mare-street, Hackney.

†1851-52 Halley, Alexander, M.D., 7, Harley-street, Cavendish-square.

1851-52 Hansard, Richard James, Esq.

*1847-48 Hare, Charles John, M.D., Physician to University College Hospital, 41, Brook-street, Grosvenor-square.

†1855-56 Harley, George, M.D. (C.), Assistant-Physician to University College Hospital, 77, Harley-street.

1862-63 Harling, Robert Dawson, M.D. Lond., 9, Upper Seymour-street, Portman-square.

1859-60 Harris, Francis, M.D., Assistant-Physician to St. Bartholomew's Hospital, and to the Hospital for Sick Children, 24, Cavendish-square.

†1857-58 Hart, Ernest, Esq., Ophthalmic Surgeon to St. Mary's Hospital, 69, Wimpole-street.

†1859-60 Hastings, Cecil William, M.B., 14, Albemarle-street.

**Orig. Memb.* Hawkins, Cæsar H., Esq., F.R.S. (formerly President), Consulting-Surgeon to St. George's Hospital, 26, Grosvenor-street.

1856-57 Hawksley, Thomas, M.D., Physician to the Margaret-street Dispensary for Consumption, 26, George-street, Hanover-square.

1856-57 Heath, Christopher, Esq., Assistant-Surgeon to the Westminster Hospital, 31, Sackville-street, Piccadilly.

1861-62 Henderson, Joseph, Esq., Deptford.

*1848-49 Henry, Mitchell, Esq. (formerly Hon. Secretary), 5, Harley-street, Cavendish-square.

**Orig. Memb.* Hewett, Prescott G., Esq. (President), Surgeon to St. George's Hospital, 1, Chesterfield-street, May-fair.

1854-55 Hewitt, Graily, M.D., Physician to the British Lying-in-Hospital, and Lecturer on Midwifery and Diseases of Children at St. Mary's Hospital, 36, Berkeley-square.

1859-60 Hill, Matthew Berkeley, M.B. Lond., 14, Weymouth-street, Portland-place.

1854-55 Hillier, Thomas, M.D., Physician to the Hospital for Sick Children, Medical Officer of Health for St. Pancras, 21, Upper Gower-street, Bedford-square.

**Orig. Memb.* Hillman, William Augustus, Esq., Senior Assistant-Surgeon to the Westminster Hospital, 1, Argyll-street, Regent-street.

Elected Session

†**Orig. Memb.* Hilton, John, Esq., F.R.S. (V.P.), Surgeon to Guy's Hospital, 10, New Broad-street, City.

1855-56 Hinton, J., Esq., Aural Surgeon to Guy's Hospital, George-street, Hanover-square.

*1850-51 Hodgson, Joseph, Esq., F.R.S., 60, Westbourne-terrace.

*1852-53 Hogg, Jabez, Esq., Assistant-Surgeon to the Westminster Ophthalmic Hospital, 1, Bedford-square.

1846-47 Holman, H. Martin, M.D., Hurstpierpoint, Sussex.

1854-55 Holmes, Timothy, Esq. (C.), Assistant-Surgeon to St. George's Hospital, and Surgeon to the Hospital for Sick Children, 22, Queen-street, May-fair.

*1849-50 Holt, Barnard Wight, Esq., Senior Surgeon to the Westminster Hospital, 14, Savile-row.

**Orig. Memb.* Holthouse, Carsten, Esq., Surgeon to, and Lecturer on Surgery at the Westminster Hospital, 2, Storey's-gate, St. James's Park.

1853-54 Hood, William Charles, M.D., Visiting Physician in Lunacy to the Court of Chancery, 45, Lincoln's-inn-fields.

1850-51 Hore, Henry A., Esq., Surgeon to the Bristol Royal Infirmary, 31, Park-street, Bristol.

1857-58 Hornidge, Thomas King, Esq., 15, Charles-street, Westbourne-terrace.

†1855-56 Hudson, John, M.D., 11, Cork-street.

1854-55 Hulke, John Whitaker, Esq. (C.), Assistant-Surgeon to the Middlesex Hospital, and to the Royal London Ophthalmic Hospital, 10, Old Burlington-street.

1854-55 Hulme, Edward Charles, Esq., Surgeon to the Great Northern Hospital and to the Central London Ophthalmic Hospital, 19, Gower-street, Bedford-square.

1852-53 Humby, Edwin, Esq., 83, Hamilton-terrace, St. John's-wood.

*1852-53 Hutchinson, Jonathan, Esq., Surgeon to the London Hospital, and Assistant-Surgeon to the Royal London Ophthalmic Hospital, Moorfields, 4, Finsbury-circus.

†1860-61 Ingram, Charles, M.D., Physician to the Royal General Dispensary, Aldersgate, 11, New Cavendish-street, Portland-place.

‡1856-57 Jackson, Henry, Esq., Senior Surgeon to the Sheffield Infirmary, St. James's-row, Sheffield.

1859-60 Jackson, Thomas Carr, Esq., Surgeon to the Great Northern Hospital, 3, Weymouth-street, Portland-place.

‡1853-54 Jardine, John Lee, Esq., Capel, near Dorking, Surrey.

1846-47 Jay, Edward, Esq., 51, Park-street, Grosvenor-square.

**Orig. Memb.* Jeaffreson, Henry, M.D. (formerly V.P.), Physician to St. Bartholomew's Hospital, and Consulting Physician to the City of London Hospital for Diseases of the Chest, 8, Finsbury-square.

**Orig. Memb.* Jenner, William, M.D. (V.P.), Physician to the Hospital for Sick Children, and to University College Hospital, 8, Harley-street.

Elected Session

1861-62 Jephson, John Holmes, M.D., Physician to the Great Northern Hospital, 1, Conduit-street West, Hyde-park.

1854-55 Johnson, Athol A. W., Esq., 20, Regency-square, Brighton.

1854-55 Johnson, Edward, M.D., 19, Cavendish-place, Cavendish-square.

**Orig. Memb.* Johnson, George, M.D., (V.P.), Physician to King's College Hospital, 11, Savile-row.

*†*Orig. Memb.* Jones, Henry Bence, M.D., F.R.S. (formerly V.P.), 31, Brook-street, Grosvenor-square.

1853-54 Jones, Sydney, M.B., Assistant-Surgeon to St. Thomas's Hospital, 15, St. Thomas's-street.

1861-62 Jones, Thomas, Esq., St. George's Hospital.

1858-59 Jones, William Price, M.D., Surbiton, Kingston.

1859-60 Jones, Walter, Esq., College-yard, Worcester.

1861-62 Junker, Ferdinand Ethelbert, M.D., 56, Gower-street, Bedford-square.

1846-47 Kent, Thomas J., Esq., 27, Holles-street, Cavendish-square.

1852-53 Kershaw, W. Wayland, M.D., Kingston-on-Thames.

1859-60 Kiallmark, Henry Walter, Esq., 46, Prince's-square, Westbourne-grove.

1851-52 Kingdon, J. Abernethy, Esq., Surgeon to the City Dispensary, and to the City of London Truss Society, 2, New Bank-buildings.

‡1856-57 Kingsley, Henry, M.D., Physician to the Stratford Infirmary, Stratford-on-Avon, Warwickshire

1854-55 Kirby, Edmund A., M.D., 1, Taviton-street, Gordon-square.

1854-55 Kirkes, William Senhouse, M.D., Assistant-Physician to St. Bartholomew's Hospital, 2, Lower Seymour-street.

*1850-51 Langmore, John C., M.B., 20, Oxford-terrace, Hyde-Park.

1857-58 Lankester, Edwin, M.D., F.R.S., Medical Officer of Health for St. James's, Westminster, 8, Savile-row.

*1849-50 Latham, Peter Mere, M.D. (formerly President), late Physician to St. Bartholomew's Hospital, 36, Grosvenor-street.

1856-57 Laurence, John Z., Esq., Surgeon to the St. Marylebone General Dispensary, 30, Devonshire-street, Portland-place.

1853-54 Lawrence, Henry John Hughes, Esq., Assistant-Surgeon Grenadier Guards' Hospital, Rochester-row, Westminster.

1858-59, Lawson, George, Esq., Assistant-Surgeon to the Middlesex Hospital, and to the Royal London Ophthalmic Hospital, Moorfields, Surgeon to the Great Northern Hospital, 63, Park-street, Grosvenor-square.

1857-58 Leared, Arthur, M.B., Physician to the Royal Infirmary for Diseases of the Chest, 12, Old Burlington-street.

*1851-52 Lee, Henry, Esq., Surgeon to St. George's Hospital, 9, Savile-row.

1852-53 Leggatt, Alfred, Esq., 13, William-street, Lowndes-square.

1861-62 Lichtenburg, George, M.D., 10, Finsbury-place.

*1849-50 Liddell, Sir John, C.B., M.D., F.R.S. (V.P.), Director-General of the Medical Department of the Navy, 72, Chester-square, Belgravia.

Elected Session

*1848-49 Little, William John, M.D. (formerly V.P.), 34, Brook-street, Grosvenor-square.

†1862-63 Little, Louis S., Esq., Assistant-Surgeon to the London Hospital, 101, Leadenhall-street.

‡1860-61 Lund, George, M.D., Madeira.

1858-59 Mackay, Allan Douglas, M.B., Stony-Stratford, Bucks.

1857-58 Marcet, William, M.D., Assistant-Physician to the Westminster Hospital, 1, Torrington-street. Torrington-square.

*1851-52 Markham, William O., M.D., Physician to St. Mary's Hospital, 33, Clarges-street, Piccadilly.

*1846-47 Marshall, John, Esq., F.R.S., Surgeon to University College Hospital, 10, Savile-row.

†1860-61 Martin, John, Esq., Cambridge House, Portsmouth, and Keydell, near Horndean, Hants.

1856-57 Martin, Robert, M.D., Assistant-Physician to St. Bartholomew's Hospital, 19, Queen Anne-street.

1852-53 Martyn, S., M.D., Senior Physician to the Bristol General Hospital, 26, Park-street, Bristol.

1858-59 Martyn, William, M.D., 6, Trevor-terrace, Rutland-gate, Brompton.

1860-61 Mason, Francis, Esq., Assistant-Surgeon to King's College Hospital, 10, Conduit-street.

†1858-59 Maunder, C. F., Esq., Assistant-Surgeon to the London Hospital, 29, New Broad-street.

‡1851-52 May, George, Junr., M.B., Surgeon to the Royal Berkshire Hospital, Reading.

1857-58 Meller, Charles James, Esq.

1859-60 Messer, John Cockburn, M.D., Assistant-Surgeon, R N., Her Majesty's ship, "Edinburgh," Queensferry, N.B.

1854-55 Miles, Charles, Esq., 13, Conduit-street West, Hyde-park.

†1858-59 Montefiore, Nathaniel, Esq., 36, Hyde-park-gardens.

1860-61 Montgomery, Edmund, M D., St. Thomas's Hospital.

1861-62 Morehead, Charles, M.D., 2, Westbourne-terrace.

*1846-47 Morgan, John, Esq., 3, Sussex-place, Hyde-park-gardens.

1852-53 Moseley, George, Esq., 23, Priory-road, Kilburn.

1859-60 Moxon, Walter, M.B., Demonstrator of Anatomy at Guy's Hospital, 6, Finsbury-circus.

*1854-55 Murchison, Charles, M.D., Assistant-Physician to the Middlesex Hospital, and Senior Physician to the London Fever Hospital, 79, Wimpole-street.

Mussy, *see* Gueneau de Mussy.

1860-61 Nelson, Duckworth John, Esq., 7, Marlborough-road, St. John's-wood.

1856-57 Nunn, Thomas William, Esq., Assistant-Surgeon to the Middlesex Hospital, 8, Stratford-place, Oxford-street.

‡1858-59 Nunneley, Thomas, Esq., Senior Surgeon to the Leeds Eye and Ear Infirmary, Leeds.

Elected Session

*1850-51 Obré, Henry, Esq., Surgeon to the St. Marylebone Eye and Ear Institution, 1, Melcombe-place, Dorset-square.

1852-53 O'Connor, William, M.D., Physician to the Royal Free Hospital, 30, Upper Montagu-street, Montagu-square.

*1850-51 Ogle, John W., M.D. (C., late Hon. Secretary), Assistant-Physician to St. George's Hospital, 13, Upper Brook-street, Grosvenor-square.

‡1855-56 Oldfield, Edmund, Esq., Boscomb Lodge, Finchley-road.

1859-60 Orange, William, Esq., Broadmoor, Berkshire.

1857-58 Ord, William Miller, M.B., Lecturer on Comparative Anatomy, at St. Thomas's Hospital, Brixton-hill.

‡1859-60 Paget, Edward H., Esq., Friar-lane, Leicester.

1853-54 Parkinson, George, Esq., 16, Hereford-street, Park-lane.

1853-54 Part, James, M.D., 7, Camden-road-villas, Camden-town.

**Orig. Memb.* Partridge, Richard, Esq., F.R.S. (formerly V.P.), Surgeon to King's College Hospital, 17, New-street, Spring-gardens.

**Orig. Memb.* Peacock, Thomas Bevill, M.D. (late V.P. and Hon. Secretary), Physician to St. Thomas's Hospital, and Physician to the City of London Hospital for Diseases of the Chest, 20, Finsbury-circus.

1862-63 Pearson, David R., M.D., Woodford.

1860-61 Pocock, William, Esq., 1, St. John's-villas, Brixton-road.

**Orig. Memb.* Poland, Alfred, Esq., Surgeon to Guy's Hospital, and to the Eye Infirmary attached, 58, Welbeck-street.

*1846-47 Pollock, George D., Esq. (V.P.), Surgeon to St. George's Hospital, 27, Grosvenor-street.

1850-51 Pollock, James Edward, M.D., (C.), Physician to the Hospital for Consumption and Diseases of the Chest, Brompton, 52, Upper Brook-street.

1861-62 Pollock, Arthur Julius, M.D., 21, Montague-place, Russell-square.

1858-59 Potter, Henry, Esq., 56, Maddox-street, Hanover-square.

1854-55 Potts, William, Esq., 12, North Audley-street, Grosvenor-square.

1856-57 Price, Peter Charles, Esq., Surgeon to the Great Northern Hospital, King's-cross, and to the Metropolitan Institution for Scrofulous Children, at Margate.

1856-57 Priestley, William Overend, M.D., Physician for the Diseases of Women and Children to King's College Hospital, Consulting Physician-Accoucheur to the St. Marylebone Infirmary, 17, Hertford-street, May-fair.

†*1848-49 Purnell, John James, Esq., Surgeon to the Royal General Dispensary, Woodlands, Streatham-hill.

1850-51 Pyle, John, Esq. (C.), 56, Oxford-terrace, Hyde-park.

**Orig. Memb.* Quain, Richard, M.D. (Treasurer, formerly Hon. Secretary), Physician to the Hospital for Consumption and Diseases of the Chest, Brompton, 56, Harley-street, Cavendish-square.

1859-60 Radcliffe, Charles Bland, M.D., Physician to the Westminster Hospital, 4, Henrietta-street, Cavendish-square.

Elected Session

1855-56 Rae, James, Esq., Surgeon, R.N., Haslar Hospital.

Orig. Memb. Ramsbotham, Francis H., M.D. (formerly V.P.), Physician-Accoucheur to the London Hospital, 8, Portman-square.

1856-57 Ramskill, J. Spence, M.D., Physician to the National Hospital for the Paralysed and Epileptic, 5, St. Helen's-place, Bishopsgate-street.

1847-48 Randall, John, M.D., Medical Officer, St. Marylebone Infirmary, 14, Portman-street, Portman-square.

1856-57 Ranke, Henry, M.D., Munich.

1846-47 Ray, Edward, Esq. (C.), Dulwich.

1858-59 Reed, Frederick George, M.D., 46, Hertford-street, May-fair.

1854-55 Reynolds, J. Russell, M.D., Physician to University College Hospital, 38, Grosvenor-street.

Orig. Memb. Ridge, Joseph, M.D., 39, Dorset-square.

1855-56 Roberts, John Henry, Esq., 10, Finchley-road, St. John's-wood.

1856-57 Robinson, Thomas, M.D., 64, Lamb's Conduit-street.

1859-60 Robinson, Frederick, M.D., Battalion Surgeon, Scots Fusilier Guards' Hospital, 7, Lillington-street, Vauxhall Bridge-road.

Orig. Memb. Roe, George Hamilton, M.D., Senior Physician to the Hospital for Consumption and Diseases of the Chest, Brompton, 57, Park-street, Grosvenor-square.

1858-59 Rolleston, George, M.D., F.R.S., 5, Broad-street, Oxford.

1851-52 Rooke, H. T., M.D., Surgeon to the Seamen's Hospital-ship, "Dreadnought."

1858-59 Rose, Henry Cooper, M.D., Hampstead.

1858-59 Rouse, James, Esq., Assistant-Surgeon to the Royal Ophthalmic Hospital, Moorfields.

1860-61 Rutter, Joseph, Esq., West-Hill, Wandsworth.

*1852-53 Salter, Henry Hyde, M.D., F.R.S., Assistant-Physician to the Charing-cross Hospital, 6, Montague-street, Russell-square.

1853-54 Salter, Samuel James A., M.B., F.R.S. (C.), Surgeon-Dentist to Guy's Hospital, 17, New Broad-street, City.

1852-53 Sanderson, Hugh James, M.D., Physician to the Hospital for Women, 26, Upper Berkeley-street.

1854-55 Sanderson, John Burdon, M.D., Assistant-Physician to the Middlesex Hospital, Medical Officer of Health for Paddington, 9, Gloucester-place, Hyde-park.

1857-58 Schulhof, Maurice, M.D., Physician to the Royal General Dispensary, Bartholomew-close, 14, Brook-street.

1853-54 Scott, John, Esq., Surgeon to the Hospital for Women, Soho-square, 65, Harley-street, Cavendish-square.

‡1858-59 Scratchley, George, M.D., B.L.S., Member of the University of France, New Orleans, Louisiana, U.S.

‡*1846-47 Seaton, Edward C., M.D., Rochester-house, Surbiton.

1856-57 Sedgwick, William, Esq., Surgeon to the Marylebone Provident Dispensary, 12, Park-place, Upper Baker-street.

*1852-53 Semple, Robert Hunter, M.D., Physician to the Northern Dispensary, 8, Torrington-square.

Elected Session

Orig. Memb. Shaw, Alexander, Esq., (late V.P.), Surgeon to the Middlesex Hospital, 22A, Cavendish-square.

1856-57 Shillitoe, Buxton, Esq., Surgeon to the Great Northern Hospital, and to the Islington Dispensary, 34, Finsbury-circus.

1855-56 Sibley, Septimus W., Esq., Medical Registrar to the Middlesex Hospital, 12, New Burlington-street.

*1848-49 Sibson, Francis, M.D., F.R.S., Physician to St. Mary's Hospital, 40, Brook-street, Grosvenor-square.

*1847-48 Sieveking, Edward H., M.D., Physician to St. Mary's Hospital, 17, Manchester-square.

**Orig. Memb.* Simon, John, Esq., F.R.S. (formerly V.P.), Surgeon to St. Thomas's Hospital, 44, Cumberland-street, Bryanston-square.

**Orig. Memb.* Smith, Ebenezer Pye, Esq., 7, Billiter-square.

1846-47 Smith, Protheroe, M.D., Physician to the Hospital for Women, 25, Park-street, Grosvenor-square.

1851-52 Smith, W. Tyler, M.D., Physician-Accoucheur to St. Mary's Hospital, 7, Upper Grosvenor-street.

1855-56 Smith, Spencer, Esq., Surgeon to St. Mary's Hospital, 9, Queen Anne-street, Cavendish-square.

1856-57 Smith, Thomas, Esq., Surgeon to the Great Northern Hospital, 7, Montague-street, Russell-square.

*1847-48 Solly, Samuel, Esq., F.R.S., Surgeon to St. Thomas's Hospital, 18, St. Helen's-place, Bishopsgate-street.

1854-55 Squire, William, Esq., 6, Orchard-street, Portman-square.

1860-61 Squire, Alexander Balmanno, Esq., 12, York-gate, Regent's-park.

1854-55 Stewart, William Edward, Esq., Surgeon to St. Marylebone Provident Dispensary, 12, Weymouth-street, Portland-place.

1862-63 Stone, William Domett, M.D., Munster House, Fulham.

1862-63 Stone, William Henry, M.D. Oxf., 13, Vigo-street, Regent Street.

†1853-54 Streatfeild, J. F., Esq., Assistant-Surgeon to the Royal London Ophthalmic Hospital, Moorfields, and to the Eye Infirmary in University College Hospital, 15, Upper Brook-street.

1862-63 Sturges, Octavius, M.B. Cant., 35, Connaught-square.

†1850-51 Sutherland, Alexr. John, M.D., F.R.S., 6, Richmond-terrace, Whitehall.

1858-69 Swete, Benjamin L., Esq., Surgeon to the British Orphan Asylum, Clapham-rise, 7, Park-road, Stockwell.

‡1856-57 Symonds, Frederick, Esq., Surgeon to the Radcliffe Infirmary, 32, Beaumont-street, Oxford.

Orig. Memb. Tamplin, R. W., Esq., Surgeon to the Royal Orthopædic Hospital, 33, Old Burlington-street.

‡1855-56 Tapp, W. Denning, Esq., Senior Surgeon to the Dorset County Hospital, Dorchester.

*1850-51 Tatum, Thomas, Esq., Surgeon to St. George's Hospital, 3, George-street, Hanover-square.

1851-52 Taylor, Robert, Esq., Surgeon to the Central London Ophthalmic Hospital, 10, George-street, Hanover-square.

Elected Session

1860-61 Teevan, William Frederic Esq., Surgeon to the West London Hospital, and Demonstrator of Anatomy at the Westminster Hospital, 10, Portman-square.

1852-53 Thompson, Henry, Esq. (Honorary Secretary), Consulting-Surgeon to the St. Marylebone Infirmary, and Surgeon to University College Hospital, 35, Wimpole-street, Cavendish-square.

‡1861-62 Thompson, Joseph, Esq., Surgeon to the Nottingham General Hospital, Oxford-street, Nottingham.

1856-57 Tomes, J., Esq., F.R.S., Surgeon-Dentist to the Middlesex Hospital, 37, Cavendish-square.

**Orig. Memb.* Toynbee, Joseph, Esq., F.R.S., Aural Surgeon to St. Mary's Hospital, 18, Savile-row.

1851-52 Trotter, John W., Esq., Assistant-Surgeon, Coldstream Guards' Hospital, Vincent-square, Westminster.

1859-60 Truman, Edwin Thomas, Esq., Surgeon-Dentist in Ordinary to Her Majesty's Household, 23, Old Burlington-street.

1857-58 Tudor, John, Esq.

*1847-48 Tuke, T. Harrington, M.D., Manor-house, Chiswick, and 37, Albemarle-street.

1852-53 Tulloch, James S., M.D., 1, Pembridge-place, Bayswater.

1857-58 Turtle, Frederick, Esq., Lamberhurst, Surrey.

1854-55 Vasey, Charles, Esq., Surgeon-Dentist to St. George's Hospital, 5, Cavendish-place, Cavendish-square.

1859-60 Venning, Edgcombe, Esq., 24, Belgrave-square.

1862-63 Wadham, William, M.D., Assistant-Physician to St. George's Hospital, 12, Park-lane, Hyde-park.

Orig. Memb. Waite, Charles D., M.D., Senior Physician to the Westminster General Dispensary, 3, Old Burlington-street.

1859-60 Walters, John, M.B., Lond., Assistant-Surgeon attached to Second Battalion, 17th Regiment.

**Orig. Memb.* Walton, Henry Haynes, Esq., Surgeon to the Central London Ophthalmic Hospital, and Surgeon to St. Mary's Hospital, 69, Brook-street, Hanover-square.

‡*Orig. Memb.* Ward, Joseph, Esq., Epsom, Surrey.

*1846-47 Ward, T. Ogier, M.D., Cowbridge, Glamorganshire.

1857-58 Wardell, John Richard, M.D., 4, Belmont, Tunbridge Wells.

1855-56 Watson, Thomas, M.D., F.R.S., (late President), Consulting Physician to King's College Hospital, 16, Henrietta-street, Cavendish-square.

1860-61 Way, John, M.D., 13, St. George's-road, Eccleston-square.

1854-55 Webb, Francis Cornelius, M.D., 22, Woburn-place, Russell-square.

1857-58 Weber, Hermann, M.D., Physician to the German Hospital, 49, Finsbury-square.

1860-61 Wells, John Soelberg, Esq., Ophthalmic Surgeon to the Middlesex Hospital, 16, Savile-row.

1853-54 Wells, Thomas Spencer, Esq., Surgeon to the Samaritan Free Hospital for Women and Children, 3, Upper Grosvenor-street.

Elected Session

*1850-51 West, Charles, M.D., Physician to the Hospital for Sick Children, 61, Wimpole-street, Cavendish-square.

1858-59 White, Frederick Esq., 20, Oxford-street, Hyde-park.

1856-57 Wilkin, Herbert C., Esq., 39, Connaught-terrace, Hyde-park.

*1854-55 Wilks, Samuel, M.D., Assistant-Physician and Demonstrator of Morbid Anatomy at Guy's Hospital, 11, St. Thomas's-street, Southwark.

**Orig. Memb.* Williams, C. J. B., M.D., F.R.S. (formerly President, late V.P.), Consulting-Physician to the Hospital for Consumption and Diseases of the Chest, Brompton, 49, Upper Brook-street, Grosvenor-square.

‡1858-59 Williams, Charles, Esq., House-Surgeon to the Norfolk and Norwich Hospital, Norwich.

1859-60 Williamson, George, M.D., Fort Pitt, Chatham.

1858-59 Wilson, Edward Thomas, M.B., Montpelier-terrace, Cheltenham.

1859-60 Wilson, Robert James, Esq., 24, Grand Parade, St. Leonards-on-Sea.

‡1861-62 Windsor, Thomas, Surgeon to the Salford Royal Hospital, 65, Piccadilly, Manchester.

*1850-51 Wood, John, Esq., Assistant-Surgeon to King's College Hospital, 4, Montague-street, Russell-square.

1854-55 Wood, William, M.D., Physician to St. Luke's Hospital, 54, Upper Harley-street.

1853-54 Wordsworth, John C., Esq., Assistant-Surgeon to the Royal London Ophthalmic Hospital, 50, Queen Anne-street.

1859-60 Wotton, William Gordon, Esq., King's Langley, Herts.

1852-53 Wright, Edward John, Esq., 13, Montague-place, Clapham-road.

1858-59 Wynter, Hugh B., Esq., 1, St. George's-place, Hyde-park-corner.

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REPORT.

SESSION 1862-3.

I.—DISEASES, ETC., OF THE NERVOUS SYSTEM.

1. *Case of circumscribed softening of the brain in consequence of plugging of the vessels by fibrine carried from the heart.*

A girl, 17 years of age, was brought into the Hospital, having suffered for a fortnight with pain in the chest, shortness of breath, great weakness, and latterly delirium. Bullæ had appeared on the feet and hands. She had twice in her life had severe attacks of rheumatism. When she came under observation, her skin was dusky, and very hot; the countenance was anxious; the pulse and respiration were rapid; the tongue dry and brown; the bowels were loose. On examination of the chest, a murmur was indistinctly heard at the apex; but the distress of the patient was such that no very satisfactory examination could be made. The aspect of the girl was much that of a fever-patient. She was treated with astringents and stimulants. Next day she was in a drowsy, half-comatose state, but still answered questions, though indistinctly. The countenance became more dusky; she grew weaker and more prostrate. The murmur was still heard, and amid incoherent mutterings she complained of pain in the cardiac region. She then lost all consciousness, and died on the fifth day after admission.

Post-mortem examination.—The pericardium was attached to the heart by old adhesions, but underneath it several quite recent deposits of lymph had insinuated themselves. These were of about the size and shape of small buttons. They were surrounded by petechial spots. In the left auricle, just above the opening of the valve, was a circular patch of excoriation as large as a sixpence. This was vascular, and showed traces of recent lymph upon the surface, which was nearly level. It had the appearance of having been the point of attachment of some vegetations which had been removed. There was a fibrinous block in

the spleen, and another in the kidney. The larger vessels leading to the deposits were unobstructed.

There was a trifling excess of sub-arachnoid fluid; this, on the top of the left hemisphere, was slightly tinged with blood. The brain was generally anæmic. The posterior extremity of the right hemisphere was excavated by a cavity as large as a small tennis ball, which contained fluid resembling pus. This, when examined with the microscope, proved to consist entirely of broken-down nervous elements—such as fragments of tubes and globules encircled by the white matter of Schwann. The cavity was not lined by any membrane; the walls were merely formed by ragged cerebral tissue. The arteries in the neighbourhood were packed full of granular fibrine, commencing with the capillaries, and passing backwards till it filled the arteries of the size of whipcord. The large vessels at the base of the brain were healthy. The cavity was almost in contact with the pia mater upon the surface; and at this point there was a minute quantity of recent lymph under the arachnoid.

This case affords an instance of cerebral disorder of a very definite character, but which, until lately, has not been recognized. It resembles in many respects one reported by the same author in the last volume of the Society's "Transactions." In that, however, the endocarditis was of distinctly rheumatic origin, and the softening of the brain was of the red variety, as it sometimes is in these cases. Both patients had febrile symptoms, but in the case previously reported the fever was less asthenic, and the delirium more active than in the present instance. In both, however, the delirium was of the low muttering type. The chief features of the disorder were the same in either case.

Dr. Dickinson, *2nd of December*, 1862.

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2. *Nerves in lepra anæsthetica.*

In vol. xiii. p. 13, will be found a communication from Dr. Carter on the condition of the nerve-trunks in anæsthetic leprosy. It was thought desirable that some of the nerves from which those observations were made should be exhibited to the Society. They were accordingly forwarded to this country, mounted in Goadby's solution, accompanied by the following communication from Dr. Carter:—

"Of the two fixed to the talc, the shorter is the median nerve taken from the lower part of the forearm: it shows enlargement, especially near the wrist. The longer nerve, which is folded up, is the ulnar nerve

of the same side, and including the lower part of the trunk in the arm (the thicker end) and part of it in the forearm (the thinner end).

"The nerve which is loose, is the posterior tibial, its lower end. In these specimens the places where I took pieces out for the purpose of examination may be seen: this was done with a Valentine's knife, very thin longitudinal and transverse sections being obtained, which were then moistened with dilute acetic acid, and carefully examined. I say carefully, because the subject is rather a difficult one to understand at first; it was only after repeated examinations that I came to the conclusions embodied in the notes sent to England. I have several other observations by me, and find on some occasions that the effusion is characterised by the presence of numerous delicate corpuscles not larger than $\frac{1}{4000}$ — $\frac{1}{5000}$ inch diameter, which took the place of the granular masses and nuclei described and figured in the paper. But the whole subject of leprosy is still under investigation, and I have purposely refrained from entering into the details which I might do until I have satisfied myself on certain topics which require time and new facts to settle. In my note-book are already the result of seven post-mortems and dissections.

"As regards the admeasurements of healthy nerves, they were taken contemporaneously from the corresponding nerve-trunks of another subject, about the same age, and whose death was not owing to leprosy."

Mr. Holmes, for Dr. H. V. Carter, *20th of January*, 1863.

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3. *Softening of the left corpus striatum. Plugging-up of the left internal carotid artery and of the coronary arteries by fibrine. Masses of old-standing decolorized fibrine between the fleshy columns of the right ventricle of the heart.*

Some of the fibrinous masses within the right ventricle, above mentioned, contained puriform fluid. A few fibrinous masses of a similar nature were found in the left ventricle also. One of the fleshy columns in the left ventricle was found to be converted into a yellowish-white mass; and a large part of the upper portion of the left ventricle, near to the auricle, had partially undergone a similar change. In these places spots of bloody ecchymoses were met with; and a branch of the coronary artery, passing through them, was blocked up by a mass of fibrine. The left internal carotid artery passing at the side of the sella turcica contained a quantity of firm fibrine and clotted blood, which

appeared as if it had been very long coagulated; and the corpus striatum of the same side was softened and of a yellow colour.

The preparation was removed from the body of a woman, æt. 56, who died at St. George's Hospital, having been for some time before admission subject to what was termed hysteria. Only a few days before death, the patient had complained of great pain at the region the heart; this was followed by œdema and incipient gangrene of the lower extremities. A drawing of the specimen executed by Mr. Perry, in the year 1829, exists in the museum of the Hospital.

Remarks.—There were several points of interest connected with this case. Dr. Ogle adduced it as a well-marked example of embolism. There can be but little doubt that the softening of the brain depended upon the plugging-up of the carotid artery; and this, as well as the occlusion of the coronary artery of the heart, was the consequence of a transference into their tubes of coagulum from within the left ventricle. It is worthy of remark that the masses of coagulum are not described as being attached to the valves of the heart, but to the inner surface of the walls of the ventricle. This case of embolism is complete in its history, and interesting as being observed at a time when the phenomena noticed were not, and could not have been, understood owing to the want of such light as that which we now possess, and by which we are able to recognize and appreciate their full value. The case is also interesting as presenting an example of certain life-symptoms which had a great semblance to hysteria, but which were in reality of graver import, and no doubt connected with the cerebral alteration which was going on. Dr. Ogle called to mind a case of a very similar nature which was described in the Society's "Transactions," vol. vii. p. 168. It was the case of a young girl, æt. 16, who was treated in St. George's Hospital as one of hysteria, or hysterical hemiplegia, and who, after leaving St. George's, became an inmate at the Middlesex Hospital, and there died with softening of the left cerebral hemisphere and partial plugging of the left middle cerebral artery of the same side, and fibrinous deposits in the spleen, kidney, &c. It is most likely also that in the case just related in full, the gangrene of the lower limbs which occurred before death was the result of fibrinous clot within the femoral vessels.

Dr. John Ogle, *20th of January*, 1863.

4. *Softening of the brain. Embolism of both middle cerebral arteries. Ulceration of the inner surface of the auricle of the heart. Fibrinous blocks in the kidneys, &c.*

The patient was a young woman who was admitted into St. George's Hospital shortly after a seizure followed by hemiplegia. Some years previously, she had rheumatic fever, which was followed by symptoms which were in all probability those of cardiac mischief; and also shortly afterwards she had an attack of scarlet fever which was succeeded by dropsy. On *post-mortem* examination, the inner surface of the left auricle was found to leave a large number of fibrinous deposits scattered over and adherent to it, and in one part there was ulceration of the lining of the auricle. Both middle cerebral arteries contained masses of solid fibrine firmly adherent to their inner surface, and quite occluding them; and the under surface of the anterior part of the middle lobes of both cerebral hemispheres was much softened. Masses of white firm fibrine were found in the substance of the kidneys.

Dr. John Ogle, *20th of January*, 1863.

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5. *Atrophy of part of the cerebellum.*

Mr. Partridge exhibited a cerebellum (taken from a middle-aged man who had died of renal disease), in which the inner half of the under surface of the left hemisphere had disappeared, or become atrophied, without apparent disease or softening; no disease was discoverable in the blood-vessels of the wasted part, nor any difference of size between them and the vessels of the opposite hemisphere.

The symptoms preceding death were general uneasiness, headache, nausea and vomiting, diarrhœa, slight delirium, great exhaustion, and a slightly comatose condition. No palsy.

Mr. Partridge, *7th of April*, 1863.

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6. *Suppuration within the cranium after a scalp wound.*

The patient, a weakly woman, æt. 61, was admitted into St. George's Hospital on the 24th of February, 1863, on account of an injury to the scalp from falling downstairs. She had been insensible for half-an-hour. On admission there was a large horseshoe-shaped wound, in which a considerable surface of the vertex of the skull on both sides was exposed, and the bone roughened. The patient was perfectly conscious. The wound was closed, generous diet was given on account of her weak condition, and she went on well till the 9th of

March, when she had a slight rigor. The wound began to look unhealthy, and there was some puffiness around it. She felt very low. Diffusible stimulants were ordered, with wine, and the wound was freely opened for the discharge of matter. She went on in the same way till the 14th, when she had a severe rigor. Vomiting came on, and was very distressing. The discharge from the wound diminished. Next day there was noticed some loss of power in the left leg. The vomiting was still very troublesome, but ceased after the stomach had been unloaded with a stimulant emetic. Two grains of calomel were ordered every four hours. On the following day the paralysis affected the arm also, and was more marked, and on the 18th had become, as far as could be judged, complete. The muscles of the face on the opposite side were also slightly affected, the features on that side acting, but not so powerfully as on the other. The tongue was not affected. The conjunctivæ were a little yellow. There had been no perspiration after the rigors. The question of applying the trephine on the side opposite the injury was now discussed. The operation was rejected on the following grounds:—The patient's extremely weak condition rendered it unlikely that any operation would be successful. The symptoms rather pointed to a diffused formation of pus, and rendered it doubtful whether pyæmia might not be present, and whether the base of the brain might not be affected. The great extent of bone exposed would make it doubtful whether, if there was a limited collection of pus, it would be hit by the trephine.

She had a severe convulsive-fit on the 19th, and died on the following morning.

Permission was given to examine the head only. In commencing the examination, the trephine was applied on the right side of the coronal suture, to a portion of the exposed bone which looked more discoloured than the rest. The diploe, where sawn through by the trephine, was quite healthy. About ʒij of pus were found between the bone and dura mater; and pus was observed to have made its way along the groove for the middle meningeal artery, nearly as far as the foramen spinale. On removing the skull-cap and pressing on the dura mater, pus flowed up through a minute opening in the dura mater, by which the collection of pus between the bone and dura mater communicated with a much larger collection in the cavity of the arachnoid. The latter covered about two square inches of the convolutions at the vertex on that side, and passed down the falx cerebri as low as the corpus callosum. At the borders of the collection of pus, the arachnoid membrane showed a red limit, beyond which the membrane resumed its natural colour, as though

the collection of pus was tending to become limited into a distinct abscess. The arachnoid membrane on the opposite side presented some membraniform effusions of blood—the traces of the original accident—but showed no signs of inflammation. The pia mater contained no pus, nor showed any sign of inflammation. The base of the brain was healthy. The cerebral substance appeared also perfectly natural; and on making sections of it, it was shown to present a healthy appearance, both in the parts immediately below the inflamed membranes and in remoter parts of the brain.

The case above detailed was peculiar in this respect—viz., that no pus was found in the channels of the diploe, and that the collection of pus below the skull-cap showed evident signs of limitation: thus rendering it mechanically possible, however improbable, that the application of the trephine might have been sufficient to afford a satisfactory outlet for the matter. In these particulars—viz., in the absence of the signs of phlebitis, or diffuse inflammation, of the diploic tissue—in the absence of effusion in the loose sub-arachnoid tissue—in the partial limitation of the pus found in the sac of the arachnoid—in the healthy appearance of the cerebral substance, and in the absence (as far as could be judged from the symptoms without examination of the viscera) of pyæmic abscesses—the case differs from all those previously recorded at St. George's Hospital in which the trephine has been applied for pus formed beneath the skull after scalp-wound. Four such cases are mentioned in Mr. Prescott Hewett's paper on the subject,* as having occurred in the decennial period — 1841-1851 — and may be thus summarised: 1. Trephined in August, 1843. Pus in the diploe; a small quantity between the bone and dura mater; extensive effusion of pus in the cavity of the arachnoid and sub-arachnoid tissue; the corresponding portions of the brain of a slate colour, soft and pulpy. 2. Trephined in May, 1845. Matter in the diploe; some yellow lymph on the surface of the dura mater: extensive effusion of puriform fluid in the arachnoid cavity and sub-arachnoid tissue; pus in the superior longitudinal sinus; secondary pleurisy and pneumonia. 3. Trephined in November, 1849. Pus in the diploe and superior longitudinal sinus; extensive effusion of pus in the arachnoid membrane and sub-arachnoid tissue; abscess in the brain; pyæmic abscesses in lung and pleuræ. 4. Trephined in November, 1847. Bones of the skull healthy; dura mater sloughy; brain-like matter evacuated by the trephine; abscess extending down to the lateral ventricle, with softening of a large portion

* Med.-Chir. Trans., Vol. XXXVI.

of the brain; bloody serum in both pleuræ, with congestion of the lungs. To these, three other cases may be added which have occurred since that period. 5. Trephined in October, 1851. Pus in the diploe; pus between the bone and dura mater, also in the arachnoid cavity and sub-arachnoid space; pus in the orbit; pyæmic deposits in the lungs. 6. Trephined in August, 1853. Pus in the diploe; none found at the operation between the bone and dura mater. Death two days afterwards. Pus then found between the bone and dura mater; also in the sub-arachnoid tissue, and in the cerebral sinuses. Secondary deposit in lung. 7. Trephined August, 1855. Pus in the diploe, between the dura mater and bone, in the arachnoid cavity, the meshes of the pia mater and the cerebral veins and sinuses; pyæmic abscesses in the lungs and shoulder-joint.

Thus there were in favour of the success of the operation the facts above enumerated, to which perhaps may be added that in the successful case of trephining for pus within the cranium under the care of Mr. Dumvile of Manchester,* the pus was situated in the cavity of the arachnoid. But the weakly condition of the patient, and the numerous ambiguities of the case prevented any of the surgeons who saw the case from recommending the operation; and perhaps the travelling of the pus down the groove for the middle meningeal artery indicated a tendency to affection of the base of the brain, which an opening at the vertex would have been insufficient to arrest.

Mr. Holmes, *7th of April*, 1863.

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7. *Abscess between cranium and dura mater.*

The specimen exhibited consisted of a calvaria presenting two trephine-apertures, which had been made, the first thirty-one, the second nineteen days before death, for the evacuation of pus confined between the bone and dura mater. It was taken from a man admitted into St. Thomas's Hospital for a severe lacerated wound of the scalp: cerebral symptoms began to make their appearance on the eleventh day, and death ensued on the forty-ninth day from the receipt of the injury. Amongst other points, there were two of especial interest in connection with the case: one, that death resulted from a large abscess developed secondarily, and probably pyæmic, in the muscles of the thigh; another, that suppuration was limited to a space between the bone and dura mater, no trace of pus being found, after death, on the arachnoid and

* Brit. Med. Journ., 1858, Vol. II. p. 743.

pia mater. For the following notes of the case I am indebted to Mr. Gordon Brown, lately one of the dressers of St. Thomas's Hospital.

B. L., æt. 29, employed as a guard on the South-Eastern Railway, was admitted into Isaac's ward, under the care of Mr. Simon, on the 16th of October, 1861. He stated that in attempting to get into a train moving from Charlton station, he missed his footing, and was thrown down with considerable violence, striking the ground with his right temple. However, he was able to get up immediately and proceeded with the train, performing his duties to the end of the journey. He then went to his home, not attributing much importance to the injury he had received. On application, an hour or so afterwards, at the Hospital, there was found an extensive lacerated wound over the right parietal bone: the wound was covered with dirt and gravel; and bone, to the extent of a shilling, was exposed, although not denuded of periosteum. The right ear was also slightly torn. He was suffering from considerable constitutional shock; though perfectly conscious and able to walk, his face was pallid and the extremities were cold; the pulse was small, and the pupils somewhat dilated. Cold water was applied to the wound, and a purgative given as soon as recovery from the collapse had occurred.

He was treated with purgatives and low diet for ten days: during this time he slept well, suffering occasionally from some little headache; and from the slightness of his symptoms, it was with considerable difficulty that he could be persuaded to keep his bed. On the tenth day from the receipt of the injury, a large piece of sloughy scalp was removed: the bone was then found denuded of periosteum, dryish and white. Peat-charcoal was applied to the surface of the sore.

On the 11th day he was feverish, and complained of headache; the face was red and flushed; the skin dry and hot; pulse 98; tongue white; bowels confined; urine scanty. Is roused from sleep by frightful dreams; has low spirits. The discharge from the wound is copious and slightly tinged with blood. The ulceration of the scalp is slightly increasing. The bone is very dry and non-vascular.

15th day.—Fever is on the increase: is very thirsty; his rest is disturbed, and he has involuntary twitchings of the lower extremities; complains of great pain across temples; at 3.30 p.m. had a distinct rigor, which lasted about a quarter of an hour; at 9 p.m. a second rigor.

16th day.—Has passed a tolerably good night; less feverish. Had two rigors, one at 11.50 a.m., another at 3 p.m.: all had about the same duration. In the afternoon was slightly sick.

18th day.—Fever much increased; complains of a sense of constriction across the forehead; has tinnitus aurium, and intolerance of light; the pupils rather dilated, but contracting under the influence of light. Respirations 36; pulse 112.—Between ten and twelve had four convulsive attacks: they were not very severe; each lasted about two minutes; and, during each attack, the head, face, and features were drawn towards the left side, the hands were violently flexed, and urine and fæces passed involuntarily. At one P.M. Mr. Sydney Jones, in the absence of Mr. Simon, and knowing that such treatment was in accordance with Mr. Simon's views, trephined through the denuded portion of bone. The bone was comparatively thin; on perforating it, there escaped about a couple of ounces of very fetid pus, which had been confined between the skull and dura mater. The surface of the latter, where exposed, was either opaque or roughened by lymph and granulations. He seemed much relieved by the operation.

19th day.—Between four and five A.M. he had six convulsive attacks. By means of a director the dura mater, which had bulged somewhat through the bone-opening, was depressed; and in this manner a quantity of thin pus, containing shreds of lymph, was evacuated. The bowels were kept well open by purgatives. In the latter part of the day had three fits.

20th day.—Had thirty-one fits. The dura mater was depressed four times; and each time some pus was evacuated.

21st day.—Had twenty fits; complains of great pain in his hips and back; has slight cough.

22nd day.—Had fifteen fits. The discharge from the wound still continues. The man is getting thinner; his countenance is sallow, and conjunctivæ yellow. During the next four or five days he improved greatly, and had no recurrence of his fits; but on the

27th day, he suffered a relapse. There was a recurrence of his febrile symptoms; he had slight rigors; his tongue was coated with a white fur; and he now began to complain of great pain and tenderness further back, towards the occipital bone. At this point, on examination, there was presented a puffy and fluctuating swelling, from which, when cut into, pus escaped. The bone forming the floor of the scalp-abscess was white, dry, and bare of periosteum.

30th day.—Has passed a bad night; does not take his nourishment: complains of pains in his head; face flushed; tongue white and furred. The wound looks unhealthy; the granulations are flabby. At eleven A.M., after consultation with, and at the request of, Mr. Simon, Mr.

Sydney Jones made a second trephine-opening near the posterior border of the parietal bone. A quantity of fetid pus escaped. The dura mater was rather dark coloured. The man was much relieved by the operation.

35th day.—His symptoms have improved much, since the second trephining. The fever and cough are less; the wounds look healthier, the first aperture closing up by granulations. Has slept rather badly last night, on account of severe pain, referred to his back and extending down the right hip and leg.

36th day.—Does not take his food so well as he did; his face is flushed; bowels constipated and urine scanty. He perspires profusely, but complains of feeling very cold. At 5 P.M. had a violent shivering attack. The pain along his thigh and leg is very acute.

37th day.—Is extremely flushed; slept tolerably well last night; tongue coated with a thick fur; pulse 86; wounds look healthy, but not discharging much; has no headache; suffers a great deal when the leg is moved; has had attacks of retching last night and to-day.

38th day.—Had a comfortable night, and feels a little better. The tongue is clean, and appetite improved.

41st day.—Was very restless last night. Is slightly delirious this morning and much weaker. The leg is œdematous, and the upper and inner part of the thigh is red. An incision, about two inches in length, was made, by Mr. Simon, amongst the adductor muscles, but the suppuration being diffused, only a small quantity of pus escaped at the time of opening. His strength was now evidently failing; he soon became unable to take his food, and died on the 4th of December, forty-nine days after admission, worn out by the pain and discharge from his secondary abscess in the thigh; his head symptoms having made steady but decided progress after the second trephining.

On *post-mortem* examination, the abscess between the dura mater and bone was found to correspond with about the lower half of the right parietal bone; the second trephine-aperture being situated a short distance from its posterior-superior angle. The first trephine-aperture was situated just below the parietal protuberance, a short distance above the squamo-parietal suture; a narrow ring of exfoliating bone, involving both tables, surrounded this aperture.

The disease in the skull was limited internally by the dura mater. No pus was traced either in the cavity of the arachnoid or on the pia mater. The brain itself also appeared healthy.

Nothing worthy of note presented itself in connection with the thoracic and abdominal viscera.

The sheath of the right psoas was occupied by a quantity of pus, which extended downwards to the abductors, and upwards to the spine. No purulent deposits existed elsewhere.

Mr. Sydney Jones, *19th of May*, 1863.

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8. *Atrophy of the nerve-cells in the spinal cord.*

The details of this case have been fully given in the British and Foreign Med.-Chir. Review for July, 1862. The patient was a man 40 years of age. He had total loss of power in the arms, deglutition was difficult, and the power of speech was gone. The legs could be raised, although he was not able to walk. The rectum and bladder were under the control of the will. His intellect was unaffected, and there was no alteration in sensation. Reflex movements could not be excited in the lower limbs.

The white matter of the cord was everywhere natural. The change was almost confined to the large nerve-cells in the grey matter. These, in the great extent of the cord, were found with difficulty. They were shrivelled to the size of their own nuclei.

The pathology of this case is due to Mr. Lockhart Clarke, who entrusted two sections, prepared by his own method, to Dr. Dickinson, in order that the members might compare the preparations with the published description.

Dr. Dickinson for Mr. Lockhart Clarke, *19th of May*, 1863.

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9. *Tubercle in the spinal cord and brain—Latent disease of the spine. Hysteria.*

The patient, an Irishwoman, said to be 21 years of age, but who looked very much older, was admitted into St. George's Hospital on March 18th, under the care of Dr. Pitman, on account of some disease of both hips. On inquiry, it appeared that she had been in the Hospital some months before, under the care of Mr. Hewett, for a similar complaint, which had been diagnosed as being hysterical. Dr. Pitman requested a surgical opinion, and the patient was ultimately transferred to the care of the late Mr. Johnson, for whom Mr. Holmes was then acting. She was violently hysterical; both hips were acutely flexed on the pelvis, and she complained extremely of pain when they were

touched; but under the influence of chloroform they became straight spontaneously, and after the application of a long splint to each for a few days they remained so, without any further complaint. No irregularity existed in the spine, and though she complained exceedingly of pain there, it did not seem that any one part was particularly tender. Large "bedsores," however, existed on both buttocks. She complained of inability to stand or walk; but it was impossible to judge how much of this was real. When she was set up on her feet she could stand and take a few steps, with assistance. There was no loss of sensation, nor jactitation of the legs, nor pricking sensations. She was ordered tonic medicines, to change her posture in bed frequently, to lie on a water pillow, and to have shower-baths. Attempts also were made to persuade her to exert herself. She seemed to improve at first, and a hope was entertained that the disease might be merely hysterical; but the fact that the bedsores became larger, instead of healing, negatived this idea. However, in the absence of decided symptoms, no active treatment could be adopted. She gradually became weaker, and her intellects, which had never been very acute, became so confused that she was hardly rational. Towards the end of her life, she had occasional fits of a convulsive nature. She died on the 22nd of April.

On *post-mortem* examination the body was found not much emaciated, but there were deep sores on the nates and hips.

Three small crude tubercles existed in the right hemisphere of the brain, about the centrum ovale. There was one of similar size and appearance in the middle of the crus cerebri. Others were also found in the left lobe of the cerebellum, one just behind the stem of the arbor vitæ.

When the spinal canal was laid open, about a teaspoonful of pus was seen outside the dura mater opposite the upper lumbar vertebræ. The membranes themselves, however, were natural, and at first sight the cord itself presented nothing unusual. A minute examination disclosed a small speck of faint discoloration at a place six inches above the terminal point. The entire cord was here occupied by a spherical tubercle, excepting only a circle of white matter which was excessively thin, and hardly served to cover the circumference of the tubercle. The cord was not swollen at this situation. All the neighbouring tissues were of natural colour and consistence. In front of the vertebræ about the lumbar region was a quantity of thick pus. Between the first and second vertebræ in this region, was a cavity filled with pus. The intervertebral cartilage had been completely removed. The spinal column

was only formed by the laminæ, at this point. Both psoas muscles were excavated by pus, which, however, had not reached the thigh on either side. The bladder was thickened and much congested. The cortical tissue of both kidneys was sprinkled with very minute abscesses, which were collected in masses and resembled secondary deposits.

A microscopic section made of the spinal cord through the tumour, by Dr. Dickinson, displayed a large granular mass occupying about two-thirds of the cord, and surrounded by slightly softened nervous matter. No distinct appearance of organization was perceived in the tumour, the minute structure of which quite supported what was concluded from its naked-eye appearances, viz., that it was a crude tubercle.

The principal interest in this case, in a surgical point of view, was to distinguish the hysterical complications, which certainly existed, from the symptoms indicative of organic disease which, on an attentive examination, were also equally clear. Considering the size of the morbid deposit in the spinal cord, it is only surprising that the paralysis was not more complete; and considering the progress which the disease of the spinal column had made, it is rather remarkable that its symptoms were so obscure. There can be little doubt that the acute flexion of the hips which was thought to be hysterical was connected with this disease, and with the inflammation within the spinal canal which had resulted from it. Mr. Holmes, *19th of May*, 1863.

II.—DISEASES, ETC., OF THE RESPIRATORY ORGANS.

1. *Destruction of the epiglottis, and of the right arytenoid cartilage, with necrosis of some of the other cartilages.*

The gentleman from whom these specimens were taken was a surgeon residing at W——, æt. 55 years, thirty of which were spent in the hard work of general practice. He had been dyspeptic for years, and latterly this was converted into chronic gastro-enteritis; he was subject also to painful and bleeding hæmorrhoids. Laryngeal symptoms and hoarseness had been present for two years, when he consulted me in February, 1862. He had been subject to pain, dysphagia, and secretion of viscid mucus, which kept him almost incessantly hawking and raking to clear the glottis. Liquids often regurgitated through the nostrils; pain and smarting were increased tenfold at night from arrest of secretion, when swallowing became very difficult. Nearly twelve

months before I saw him, he wrote to a friend that he then took but one meal a-day, swallowed with extreme pain, lasting during deglutition only. He was easy when not swallowing. He had then also attacks of spasm of the glottis twice a-day, commencing with intense stinging pain, followed by violent coughing of a most distressing character; this was followed by dyspnœa, only relieved by an outpouring of plastic secretion hanging in ropes a foot long, and most difficult to dislodge from the mouth. He then fell back exhausted; and what he dreaded was suffocation during these attacks.

He was submitted to inspection with the laryngoscope on the 21st of of February last in the presence of Dr. Henry Davies, of Putney. He bore the examination pretty well. The mucous membrane of the entire fauces and larynx was extremely relaxed, congested, and pouring out mucus. On the right side of the pharynx low down, spreading to the tongue, the membrane possessed a purple redness, and was the seat of the constant pain in swallowing. The epiglottis was red on its exterior surface; it was distinctly and readily visible, and was seen by Dr. Davies as well as myself. The uvula was long and pointed. The action of all the parts was free, perhaps too much so. The interior of the larynx was not diseased, the action of the vocal cords was perfect. The thyroid cartilage and os hyoides were much separated from relaxation of the intervening membrane, but no displacement of the ligaments was made out. At the base of the tongue, in the hollow in front of the epiglottis, the follicles were greatly hypertrophied, and seen pouring out white frothy mucus. The mucous membrane here, as well as in the middle of the pharynx, was red and raw. The voice was rough and cavernous, the throat large and capacious. Emaciation was most extreme; in fact, he was a living skeleton. He had been subject to bronchitic attacks; the breathing was slow, regular, and deep, about ten or twelve per minute, and vocal fremitus was felt all over the chest. There was no dulness anywhere. A little faint mucus râle was heard for a moment, but then disappeared in the anterior and upper part of the chest. The pulse was slow and regular, 68 per minute. A white annulus was present in each eye, but observed when he was a boy. The only thing that pointed to the cause of the mischief was the dark red membrane on the right side, in connection with the aryteno-epiglottidean fold of that side; but with all his misery, the action of the parts was good.

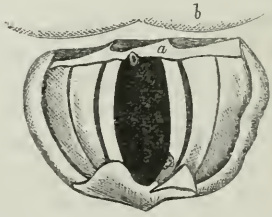
Treatment afforded no relief, for he was indisposed to take anything, beyond morphine at night; and after great suffering and misery, and

when nearly worn out from exhaustion and starvation, he passed away quietly and calmly, on 17th May, 1862, and was not suffocated.

Post-mortem examination four days after death by Dr. Davies, who subsequently transmitted to me, on the 27th of May, the various parts for examination. The body was extremely emaciated. The lungs were found collapsed, and throughout the greater part crepitant to the touch, but here and there emphysematous; they were said to contain yellowish hard nodules, supposed to be tuberculous, but I failed to recognize this character. They were adherent superiorly and below. I observed several small cavities which were the terminations of bronchial tubes, and were no doubt dilatations of the latter, and not vomicæ. There were here and there a few small calcareous nodules. The right bronchus at its division formed very large tubes, the rings were separated and projecting.

The free portion of the epiglottis was found wholly destroyed; a small ulcer was seen below its base. The apex of the left arytenoid cartilage had perforated the mucous membrane, and was quite bare. An ulcer was present at the apex of the left, but without perforation. The joint of the left was cut open in the preparation. The cricoid cartilage was undergoing calcification and necrosis. Both vocal cords were intact, the left was on the point of undergoing breach of surface. The terminal ends of the larger cornua of the hyoid bone looked as if possessing capsules, but this has to be determined by future dissection. Besides these, the base of the tongue was raw and excoriated, and little ulcers were noticed on either side of the larynx. The woodcut gives a laryngoscopic

Woodcut 1.



a, The base of the epiglottis. *b*, The back of the tongue. The black space in the centre is bounded on either side by the vocal cords, at the base of which are seen the arytenoid cartilages. The position of right and left, anterior and posterior, is reversed in the laryngeal mirror.

view which I made of the larynx, as it would have appeared before

death, and may prove instructive in diagnosing lesions of the epiglottis and arytenoid cartilages.

The right testicle, which had become painful and enlarged a few days before death, presented the appearance of fibrous degeneration, with a smooth, uniform, and somewhat striated surface, very hard, and having a cancroid aspect.

There are a few points for consideration in this case. What was the nature of the disease here? It would occupy too much space to go into the patient's early history as furnished by himself, but it would seem from pretty good evidence, that there was a syphilitic history before death, which has probably influenced the patient throughout more or less the whole of his life.

What gave rise to the fearful attacks of spasm and difficulty of breathing? These were due, no doubt, to a carious condition of the right arytenoid cartilage, during motion in swallowing food or saliva, and not to loss of the epiglottis, because the latter was present and readily seen by the laryngoscope three months before death. From the appearance presented by the root of the epiglottis, it would seem as if the cartilage had become detached by three different lacerations, from commencing ulceration at the base, and this may have happened only a short time before death.

Magendie, Trousseau, and Belloc refer to the cases of individuals who were totally devoid of an epiglottis, and, who yet swallowed without difficulty, and Magendie remarks, that if, in laryngeal phthisis with destruction of the epiglottis, deglutition be laboriously and imperfectly accomplished, it is owing to the carious condition of the arytenoid cartilages, and to the lips of the glottis being so much ulcerated as not to be able to close the glottis accurately. The correctness of these observations is further shown by two additional cases brought before the Society by myself, and detailed further on. Dr. Gibb, *21st of October*, 1862.

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2. *Perforation of the lung, pneumothorax, and effusion into the pleura from the bursting of two small tuberculous cavities, in a child three-and-a-half years of age.*

B. C., a male child, æt. 3½ years, had been staying at a friend's house for a fortnight, and returned home apparently in good health on the 23rd of October, 1862. He had, however, slight cough, and brought up a spot of blood on some phlegm the day after his arrival; but he played and ate as usual. On the 29th he was seen by Mr. Sawyer, of

Park-street, and was found to be suffering from great dyspnœa, restlessness, with almost imperceptible pulse, and suppression of all the secretions. The respiratory sounds were very feeble on the right side. He was treated by calomel and ipecacuan, and a blister was applied to the side. On the next day he had rallied, the pulse rose; but the child was evidently in great distress, and screaming violently. On the 31st Dr. Pollock was called in and found the child much exhausted, respirations 64, pulse 140, very thready; there was also great restlessness, and a very collapsed expression of countenance. On examining the chest the existence of pneumothorax on the right side was evident. Anteriorly, from the nipple down, there were tympanitic percussion note, and very marked metallic sounds both on inspiration and expiration, together with amphoric blowing. A very feeble respiratory murmur was heard over the upper part of the lung; the base posteriorly was dull, no respiration heard. Puerile respiration in the opposite lung. Some œdema of the integuments existed over the seventh and eighth ribs at the right side, but no fracture was detected. The diagnosis was at once made of perforation of the lung, pneumothorax, and subsequent effusion into the pleura. The cause of the perforation remained to be seen. There was no evidence of injury having been received, while, on the other hand, the previous tolerably good state of health of the child, and the absence of predisposition to tubercle in the family (for which careful inquiry was made) rendered it unlikely to have resulted from the rupture of a tuberculous cavity. Adopting this theory of its cause, the tubercle must have been recent, and of most limited extent, for the child's general health was entirely unimpaired. The child died the same evening.

On the 2nd of November the *post-mortem* examination was made by Dr. Pollock and Mr. Sawyer. The body appeared to be fairly nourished. On opening the right pleura air escaped through the incision. The lung, collapsed, lay in the upper and back part of the pleural cavity. Both the costal and pulmonary pleuræ were rough, and lined with fresh lymph, and flakes of lymph floated about in a thin turbid fluid of which there were twelve ounces. A single band of adhesion connected the base of the right lung to the diaphragm; another band stretched across to the seventh rib. There was no fracture of the ribs. The lung was removed, and a blowpipe tied into the bronchus. On immersing the lung in water, and blowing through the tube, air issued freely from a point in the interlobular fissure, and from another in the posterior edge of the lung. The lung itself was collapsed, sunk in

water, and was coated all over with shreds of lymph. A probe passed easily from the ruptured part into a small cavity in the middle lobe of the lung. It is of irregular shape, and less than half-an-inch across its widest measurement. A second still smaller cavity was found in the back of the lung where the pleura was also ruptured. The rest of the lung was entirely free from tubercle. The opposite lung and pleura healthy. From these appearances it was evident that two small and unsuspected cavities had been formed in the lung, the larger very near the interlobular space, and that they had ruptured the pleura, and so given rise to the phenomena of pneumothorax, followed by liquid effusion into the pleura, and terminating in death.

Dr. Pollock, *4th of November*, 1862.

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3. *Cancer of mediastinum and lung, with external tumour.*

C. L., æt. 54, was admitted into the Hospital for Consumption under Dr. Pollock's care, on the 8th of August, 1862. He had no known predisposition to tubercular and cancerous disease; had gout four years ago, and was out of health ever since. Sixteen weeks ago had hæmoptysis, and cough ever since. He is a stout, well-built man. He complains of much dyspnœa on exertion, and of lancinating pain through the left side and shoulder; cough severe night and day; expectoration moderate, viscid and always of a prune colour. Has slightly lost flesh; there is no hectic. The face is congested, bloated, and of a dark venous colour. The fingers are markedly clubbed. When in bed, he generally lies with head low, and the body slightly turned over on the left side. The right pupil is larger than the left, the right radial pulse fuller than the left. On inspection, the movements of the left side of the chest seem nearly lost; the external chest veins are enlarged, and more so, as well as lower down, on the left side. On percussion, the left side is absolutely dull all over the front to the base, the dulness extending across the upper two-thirds of the sternum, and the lower third. There is complete absence of respiration over the dull part. Posteriorly, in supra spinous fossa, bronchial respiration and bronchial voice; very tubular respiration along the spine where the vocal fremitus is much increased; the extreme base posteriorly presented slight moist crepitation. Respiration puerile and rough over the right side. His natural voice had been a deep bass, but he now speaks in a high treble. There is no dysphagia; much tenderness exists over left front so that repeated examinations became impossible. In about a week, a slight prominence

of the chest walls was manifest at the second and third ribs. This was hard and exquisitely tender, and the centre of the lancinating pains from which he suffered. This swelling increased daily till he died. The diagnosis of a cancerous mass, occupying the mediastinum and encroaching on the left lung, was recorded at the first visit, and the progress of the case only verified this opinion. He died exhausted on the 15th of October. There had never been excessive dyspnœa. The left radial pulse became imperceptible before the right.

Post-mortem appearances thirty hours after death.—The left pleura contains a large quantity of clear fluid; it is firmly adherent to the lung. A cancerous growth is seen in the posterior mediastinum, which is adherent to the vertebræ, as low down as the last dorsal vertebra, and extending upwards along the neck. It presses on the left lung, and surrounds the various structures at the root of the lung, and is continuous anteriorly with the tumour which is seen externally. The left lung, compressed to the size of a man's fist, is infiltrated in its upper third with cancerous matter. The left bronchus nearly obliterated; the left pulmonary artery much narrowed; the arch of the aorta not pressed on. The right lung is of average size. In the lower lobe are two cancerous deposits, white, cerebriform, and possessing the usual microscopical appearances of cancer. A puckering of the lung is seen on its surface in the lower lobe, and on cutting into it, there is a small cretified mass. There are two cicatrices at the apex of this lung: no recent tubercle. One of the bronchial glands at the root of this lung is converted into a cretaceous mass. Heart, liver, and kidneys healthy. The external tumour when microscopically examined, appears to be cancerous. Beneath the pectoral muscles, and extending into the axilla on the left side, a fatty mass was found, weighing six ounces. Under the microscope, it appeared as true fat.

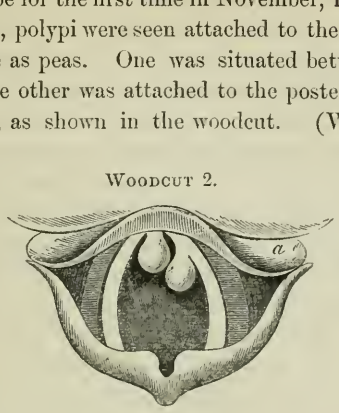
Dr. Pollock, *4th of November*, 1862.

4. *Polypoid growths removed from within the larynx, by means of the laryngeal écraseur.*

The patient was a gentleman, æt. 37, who had been the subject of hoarseness and varying aphonia for twelve years, which supervened upon an attack of yellow fever in the West Indies. In recovering from this, he was profusely salivated, and permanent hoarseness commenced. In the open air, he spoke only in a whisper; in-doors the voice was stronger, and possessed a rough laryngeal sound. He had been under

every variety of treatment for many years without any benefit, as the true nature of his malady was never made out, until examined by myself with the laryngoscope for the first time in November, 1862. Two distinct, fleshy, pedunculated, polypi were seen attached to the vocal cords; they were nearly as large as peas. One was situated between the two cords anteriorly, whilst the other was attached to the posterior free border of the left vocal cord, as shown in the woodcut. (Woodcut 2.) This

Woodcut 2.



a, The epiglottis. One tumour is seen to arise between the two vocal cords anteriorly, the other from the left vocal cord.

patient was shown to many gentlemen, amongst others, to Mr. Henry Smith of Caroline Street, on the 5th. On the 6th, I succeeded in removing, with the laryngeal écraseur of my own contrivance (manufactured for me by Weiss and Son), by the aid of the laryngeal mirror, the left tumour; and on the 8th, the other situated in the mesial line, with the able assistance of Mr. George Lawson and Mr. T. Carr Jackson.

The voice and hoarseness were immediately improved, he could readily fill his chest with air, and felt much more ease in breathing. There was no bleeding. Anæsthesia of the fauces had been produced by the internal use of the bromide of ammonium.

Under the microscope, the growths were found to consist of delicate fibres without nuclei, in a transparent basement membrane, with multitudes of epithelial cells, many of which were free.

A little congestion of the larynx followed, but the recovery was most satisfactory, and the voice became strong.

Dr. Gibb, *18th of November*, 1862.

5. *Ulceration of the membrane covering the turbinated bones, the cause of epistaxis for thirteen years, as seen by the Rhinoscope.*

J. G., æt. 17, a girl of strumous habit, pale and delicate-looking, admitted under my care at the West London Hospital, on the 8th of November, 1862, for epistaxis. She had had pertussis, rubeola, and scarlatina, when four years old; after the last, she became subject to epistaxis, which remained persistent, occurring daily from both nostrils, but more so from the left than the right. The catamenia had commenced seven months ago. Rhinoscopy was difficult on account of the contraction of the velum palati from the scarlatinal angina (no doubt attended with ulceration, as cicatrices were seen here and there), yet it was performed, and showed very red and vascular ulcers on the posterior surfaces of both inferior turbinated bones, which gave rise to the bleeding which had blanched the patient. These ulcers are shown in the engraving.

Woodcut 3.

The left turbinated bone is seen to the right of the figure, and the right to the left of the figure, the parts being reversed in the mirror.

With the laryngoscope were seen two deep round hollows, not ulcerated, on either side of the ligament of the epiglottis at the back of the tongue; the cartilage itself was thin and worn, not such as is usually seen in the young. The larynx was normal, and the movements of the vocal cords free; a tubercle the size of a small pea was present on the surface of the right aryteno-epiglottidean fold near its outer border. On looking through the nostrils in front, the mucous membrane covering the turbinated bones, appeared very red and swelled.

Topical treatment here, and attention to the general health were the chief means relied upon to bring about a cure.

Dr. Gibb, 18*th of November*, 1862.

6. *Paralysis of the larynx after diphtheria, permitting of a view of the bifurcation of the trachea.*

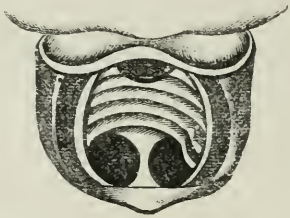
The paralysed condition following diphtheria readily permitted of a correct appreciation of the extent of the loss of nervous power, as seen in the present instance, probably for the first time, with the aid of the laryngoscope. The larynx and trachea seemed to form one continuous and expanded tube, which when straightened by position, permitted of a remarkably distinct view of the commencement of the right and left bronchial tubes.

J. W., æt. 33, employed in a fat-melting factory, at Kensington, contracted diphtheria from his three children, one of whom, a girl of five years old, died. One of the girls who recovered had paralysis of the throat, with the usual symptoms. The attack in the father, three weeks after his first child, commenced with shivering; the fauces were lined with a thick, yellowish-white, leathery membrane, a piece of which became detached on one morning and nearly produced suffocation, until it was removed by the surgeon who had attended him. A week before he came under my care at the West London Hospital, his voice became affected, and fluid passed through the nostrils. The voice has a peculiar nasal twang, like a person with cleft palate; his eyesight is likewise affected, he can only read large print held at a distance, and in writing the paper must be placed far from him. The gums are sore and tender, but not from mercury. Has little or no sensation in the fauces. The mucous membrane looks red and raw, with patches of ulceration at the back of the pharynx; the velum is prominent, with a considerable space behind it, and the tonsils are enlarged and ulcerated. He is exceedingly weak and tottering, and the slightest exertion throws him into profuse perspiration.

From the insensible state of the throat and the limited mobility of the parts, laryngoscopy was very easy, and a remarkably clear view of the larynx and trachea was at once obtained on the first introduction of the laryngeal mirror. The larynx seemed to be much expanded; the vocal cords lay close against its walls; they were apparently thin, of a greyish-white colour, and possessed no action whatever. The rings of

the trachea were readily observed all the way down to the bifurcation, which was remarkably distinct, the patient's neck becoming straight from the head being well thrown backwards. The outer part of the trachea, immediately above the origin of the left bronchus, bulged slightly inwards, resembling a sort of tumour, but in reality not one. This was readily seen several times, and is depicted in the drawing taken at thetime (*See* Woodcut 4), although it is not represented sufficiently prominent.*

Woodcut 4.



He was treated by the internal use of the citrate of strychnine and iron in infusion of calumba, with the topical use of a solution on one occasion only of the argento-nitrate of mercury, which healed up the ulcers. In two months he was convalescent, the voice was restored, and the paralytic symptoms had mainly disappeared. The bifurcation could be seen only the first few days, so long indeed as the vocal cords remained paralysed.

Although I have now seen the bronchial tubes in many cases of disease, the most favourable to permit of a good view are cases of severe diphtheritic paralysis, when there is not only an almost total absence of sensation in the fauces, but the parts are freely expanded.

Dr. Gibb, *16th of December*, 1862.

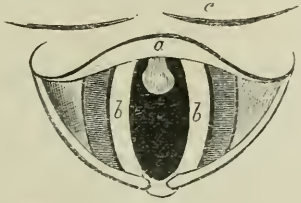
7. *Fibro-cellular polypus of the larynx, the size of a pea, successfully removed.*

The patient was a gentleman, æt. 42, the subject of hoarseness and dysphonia for ten years. He had rubeola at twenty-four years of age, pertussis at thirty, and variola at forty. The voice possessed a sort of hoarse whisper, and was constrained as if the trachea was tied. He

* A full report of this case appears in the Lancet, Vol. II. 1862, p. 564.

had undergone every variety of treatment, but the nature of his complaint had never been suspected. The laryngoscope showed the long existing symptoms to depend upon the presence of a polypus the size of a pea, situated immediately below the origin of the two vocal cords, and no doubt originating in the anterior part of the sub-glottic space. In speaking, the tumour would glide upwards between the cords, and so prevent their action. The left aryteno-epiglottidean mucous fold was swollen from œdema, and impaired in its action. The drawing accurately represents the condition of the larynx as sketched at the time (Woodcut 5).

Woodcut 5.

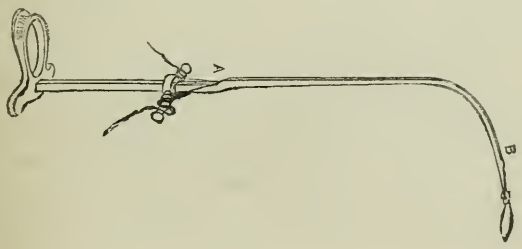


a, The epiglottis. *b*, The vocal cords, between which is seen the polypus. *c*, Back of the tongue.

The polypoid growth was alternately prominent or retiring according to the state of relaxation of the throat.

Anæsthesia of the fauces was produced by the internal use of the bromide of ammonium; yet on attempting to introduce the laryngeal écraseur* (of which the annexed woodcut is a representation), the reflex

Woodcut 6.



* It is described in the Lancet of May 20th, 1862, p. 520.

action, through contact with the epiglottis, frustrated attempts at removal, notwithstanding the celerity of my movements. On the 10th December, 1862, aided by Mr. Alex. Ure, Dr. Richardson (who admirably gave chloroform), Dr. Logan, and Dr. Fisher, I very readily succeeded in catching the pedicle in the wire noose of the écraseur, and the tumour was detached. The merest trace of blood was visible.

The result of the operation was marvellous. The voice instantaneously became altered and sonorous, the chest filled with air, and the patient felt as if suddenly possessed of increased bodily power and energy. Nothing untoward followed, and a good recovery ensued.

In composition the growth was similar to that removed in a previous instance, consisting almost wholly of epithelial cells, with a very few fibres. Dr. Gibb, *16th of December*, 1862.

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8. *Adipose tissue from the pleura.*

The preparation was removed from the body of a corpulent man, sixty years of age. The right pleura was occupied by very firm adhesions. When these were broken down the surface of the lung was seen to be covered with a widely-spread layer of fat, such as might have been found on the heart. It was generally about an eighth of an inch in thickness. The fat occupied the interval between the two layers of pleura, and had been probably deposited in the adhesions. When examined with the microscope it was seen to consist of genuine organized fat, such as exists normally in other parts of the body, and from which it could not have been distinguished.

The existence of this tissue within the pleura is believed to be a very rare occurrence. The case has been put on record as an undoubted instance of the condition. Oil has been described as existing in the same situation in a previous volume of the Society's "Transactions;" but there was some doubt as to whether this might not have been due to decomposition. A member of the society observed, that a "fringe of fat" had been described by Sir A. Cooper as existing on the edge of one of the lungs of George the Fourth. Dr. Watson, in his lectures, expresses an opinion that emphysema must have been thus mistaken. Probably, the material was, as in this case, real adipose tissue.

Dr. Dickinson, *16th of December*, 1862.

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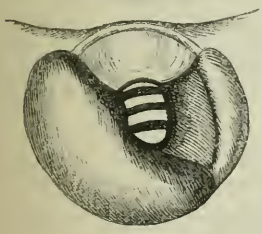
9. *Congenital deformity and arrest of development of the larynx, in an adult deaf-mute.*

A man, æt. 54, was born deaf and dumb; married three years—no children. Is very intelligent, and can read and write and converse by means of a slate. Examined with the laryngoscope in October, 1862. The epiglottis was seen low down, about one-half of its usual length, and was concealed or exposed, according to the action of the right aryteno-epiglottidean fold of mucous membrane, which projected across the glottis, encroaching upon the left side; the left aryteno-epiglottidean fold, and no doubt the arytenoid cartilage of the same side, were wanting, but the mucous membrane dipped into the larynx, where it met the right fold, and thus formed the glottis.

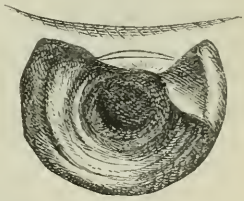
The vocal cords were wholly absent, and the movements of the larynx were chiefly—indeed, for the most part, entirely confined to the right fold of membrane described, which appeared alone to perform opening and closure, as shown in the woodcuts. The epiglottis was useless for all practical purposes, and constantly maintained the erect position in the situation which it occupied, being uninfluenced by the act of deglutition, with or without food.

The right aryteno-epiglottidean fold, in some views of it, formed an apparent cushion, as seen in Woodcut 8.

Woodcut 7.



Woodcut 8.



The parts are reversed in the drawings, as seen with the mirror, for the right side is situated on the left in each.

In Woodcut 7 the epiglottis is shown at the back of the tongue, with the right epiglottidean fold extending across to the left side, with the malformed glottis open, through which are noticed the rings of the trachea.

In Woodcut 8 the action of the fold is shown in closing the glottis, but the apex of the epiglottis is left to indicate its position when the glottis is completely closed. The prominent cushion formed by the middle of the fold is noticed in this figure.

The rings of the trachea could be seen on deep inspiration, and they

presented nothing unusual. The tongue was large and thick. The throat looked like a confused jumble of the parts, as if the result of disease about the larynx, but it was clear that the deformity was congenital. Externally, the prominence of the pomum Adami was visible rather sharp, but the thyroid cartilage was considerably flattened and spread out laterally; its base, *i.e.*, the junction with the cricoid, was as large as its upper part. The interval in front, between the hyoid bone and the thyroid cartilage, was much greater than is natural.

This patient's wife, æt. 47, equally educated and intelligent, examined at the same time, was found to possess no vocal cords at all, the opening and closing of the larynx being performed by the aryteno-epiglottidean folds. This showed a large and wide air-tube, commencing at the upper larynx, thus permitting of an expansive view of the trachea. The husband articulated sounds more distinctly than the wife.

Dr. Gibb, *20th of January*, 1863.

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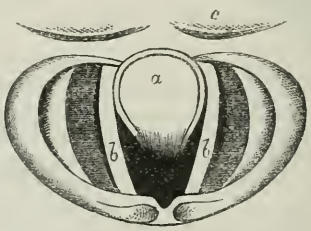
10. *Congenital deformity of the larynx in a deaf and dumb boy.*

A boy, æt. 14½ years, was examined by myself in November, 1862, at the Deaf and Dumb Asylum, Old Kent Road, with a large number of others, through the kindness of the Rev. James H. Watson, the Principal.

In this boy, the epiglottis originated low down, as in the previous case, close to the vocal cords, being about one-half of its usual length, and therefore practically useless in deglutition. The glottis was covered by the two usual folds of mucous membrane, originating from the back of the tongue. The vocal cords and other parts were normal. He could utter the vowel sounds.

Woodcut 9.



a, The epiglottis. *b*, The vocal cords. *c*, Back of the tongue.

In about thirteen per cent. of the cases here examined, the epiglottis was pendant more or less backwards.

The impression seems to be pretty general amongst physiologists, that in deaf dumbness, the organs of speech are not only present, but complete and perfect, and that the dumbness is the result of the congenital deafness, because the hearing of speech is lost. If this view is correct, then the larynx ought to be healthy, and natural in conformation in those born deaf. It is computed that the number of deaf and dumb persons in Europe is about 250,000. Can it be possible that their ears alone are at fault, and their vocal apparatus not so? I think not, and believe that in a certain number coincident malformation or deformity of the larynx will be found, together with a like condition of the ears. The laryngoscope will add much to our knowledge on this point, if advantage is taken of any opportunities that may present themselves for inspection. I have been the first to draw the attention of the English reader to this subject in the *Medical Times* of the 12th November, 1862. Dr. Gibb, *20th of January*, 1863.

11. *Deformity of the larynx with a double voice, the result of a wound of the left vocal cord.*

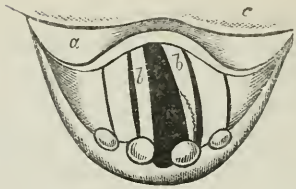
The subject of this was a young man, æt. 21, a ship's officer, who, about three years ago, when at Hong Kong, and recovering from an attack of fever and ague, fell off some spars on the deck of his ship with an open penknife in his hand. The blade of the knife penetrated the left side of his neck and wounded the larynx; about an inch-and-a-half of the blade entered, for that much of it was stained with blood. This was followed by dysphagia and aphonia; on recovering from which his voice was double, being a mixture of tenor and bass, at one time the former and then the latter. This he found very inconvenient in his calling. A small cicatrix was visible in the neck.

Laryngoscopy was easy, and showed a fine capacious larynx and trachea. The true and false cords took an oblique direction from before backwards towards the left side. The right vocal cord was natural, but the left was narrowed and contracted near its attachment to the arytenoid cartilage, and did not meet its fellow at this situation during phonation. A very distinct oblique cicatrix could be seen, showing where the cord had been at one time divided. These peculiarities are exemplified in the drawing.

His sentences were short, only three or four words at a time, commencing in a tenor, and ending sometimes in a low bass. It was an

unfavourable case to treat, yet some slight improvement in speech

Woodcut 10.



a, The epiglottis. *b*, The two vocal cords; on the left is seen the cicatrix of the wound. *c*, The tongue.

resulted from remedies local and constitutional, which permitted of greater freedom of movement of the affected vocal cord.

Dr. Gibb, *20th of January*, 1863.

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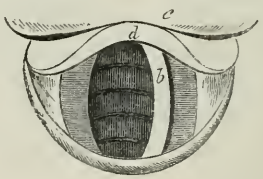
12. *Deformity of the larynx, and alteration of speech, from small-pox.*

The subject of this was a female, æt. 43, sent me by Dr. Wright, of Somerset Street, 15th of December, 1862, to examine an account of deficient phonation.

When four years of age she had small-pox; a fit occurred, and after it the upper part of the neck became much swollen; she remained speechless for six months. She was very weak and nervous up to the age of fifteen. She married and had three children. Her speech remained indistinct until she grew up, when it became a little clearer, although still imperfect. All her other faculties are good; she was operated upon for strabismus by Mr. Ure at 21. Never could sing. The laryngoscope showed the right vocal cord to be destroyed, no doubt

Woodcut 11.



b, The left and only vocal cord. *c*, The back of the tongue. *d*, The epiglottis.

by the small-pox; the left was normal. Her language is that of a child in pronunciation, *e. g.*, calling

good — dood	silly — chilly
clever — chever	thin — chin
stout — tout	stopped — topped.

and so on.

The woodcut shows the view obtained, but in phonation the left cord moved freely across to the right side.

Dr. Gibb, *20th of January*, 1863.

13. *Fat in the pleura.*

This specimen was taken from the left pleural cavity of an adult male, in the dissecting-room of Westminster Hospital, about a fortnight after death.

The heart and lungs were apparently healthy. The fat formed a layer, about one-quarter of an inch thick, occupying nearly all the anterior and lateral parts of the left pleural sac, and united by adhesions with the pleura in various places. It was examined microscopically by Mr. Power, and found to be true fatty tissue.

In the earlier part of the session Dr. Dickinson exhibited a similar specimen.

These two cases would thus seem to confirm the accuracy of Sir Astley Cooper's statement—that the lungs of King George IV. were found garnished with a fringe of fat.

Mr. Teevan, *3rd of February*, 1863.

14. *Epithelial tumour* (*epithelioma*) *of the larynx of unusually large size. Tubercle in the lung.*

The tumour consisted of a lobulated, warty, or cauliflower-looking growth springing from the whole length of the left vocal cord. About two-thirds of its bulk was above the level of the glottis; about one-third below, and in the trachea. Its size was such as all but completely to block up the passage: a probe the size of a crowquill could, however, be passed along the posterior wall. In its largest diameter it measured four-fifths of an inch, and was half-an-inch in breadth, and before the larynx was opened it reached nearly up to the base of the aryteno-epiglottidean folds. On *microscopical examination* the growth was found to consist of a vast number of epithelial cells of various sizes and shapes (some being

of the character of so-called mother or parent cells), along with a considerable quantity of fibrous tissue, mostly of a very firm consistence. The preparation was removed from the body of a woman, æt. 23, married, who applied for admission to the Brompton Hospital on the 15th of July, 1862. She worked in the fields, and had been subject to cough all her life, but dated her illness from twelve months previously. Her family were phthisical; her father and twelve brothers having died of this complaint. On first application, the presence of tubercle at the apex of the right lung was detected, but the most urgent symptoms were attributed to some laryngeal affection, which had appeared four months before; since then there had been complete aphonia, great dyspnœa, especially at night, and uneasiness referred to the larynx. When first seen, the act of inspiration was slow and difficult, there was croupy cough of a particularly shrill and vibratory character. A month later she was admitted into the wards, with no alteration in symptoms. She was very restless, and the act of swallowing caused dyspnœa. Respiration was deficient under the right clavicle, of a tubular character, the resonance on percussion being good and equal on the two sides. The laryngoscope was not resorted to, from fear of a fatal or dangerous dyspnœa being produced by its use. Two days after admission she died suddenly with symptoms of asphyxia. These symptoms began while she was standing in the ward, by gasping, struggling, and irregular movements of the arms. In a few seconds the face became livid; within a minute she was insensible; motion ceased, and the pupils gradually dilated; pulsation could be distinguished in the heart and carotids for some seconds longer.

On *post-mortem* examination, in addition to the state of the larynx above described, a large and solid mass of tubercle, very defined, was found at the apex of the right lung, and in the centre of this was a small cavity of the size of a nut. The rest of the lungs were remarkably free from tubercular deposit; they were emphysematous at their edges, and contained much thin, frothy, serous fluid.

Dr. Ogle said he was indebted to his friend, Dr. Stone of the Brompton Hospital for the opportunity of minutely examining and exhibiting the specimen. He had had a drawing of the specimen made by Dr. Westmacott (*See* Plate I, Fig. *a*).

Remarks.—In addition to the interest attached to an epithelial growth of such dimensions at such a part, Dr. Ogle observed on the fact, that the act of swallowing caused dyspnœa in this case. He also pointed out the fact of the coincidence of tubercle in the lung, and an epithelial growth in the same subject.

DESCRIPTION OF PLATE I.

Fig. a illustrates Dr. J. W. Ogle's Case of Epithelioma of the Larynx, p. 32.

Fig. 2 is a Fibrinous Concretion of a globular form, lying loose within the Left Auricle of the Heart. Dr. Ogle's Case, p. 127.

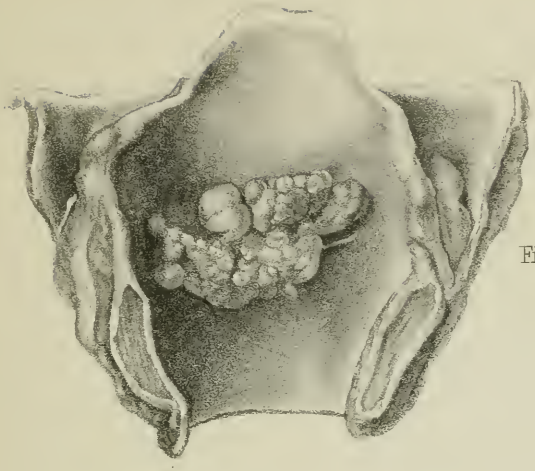
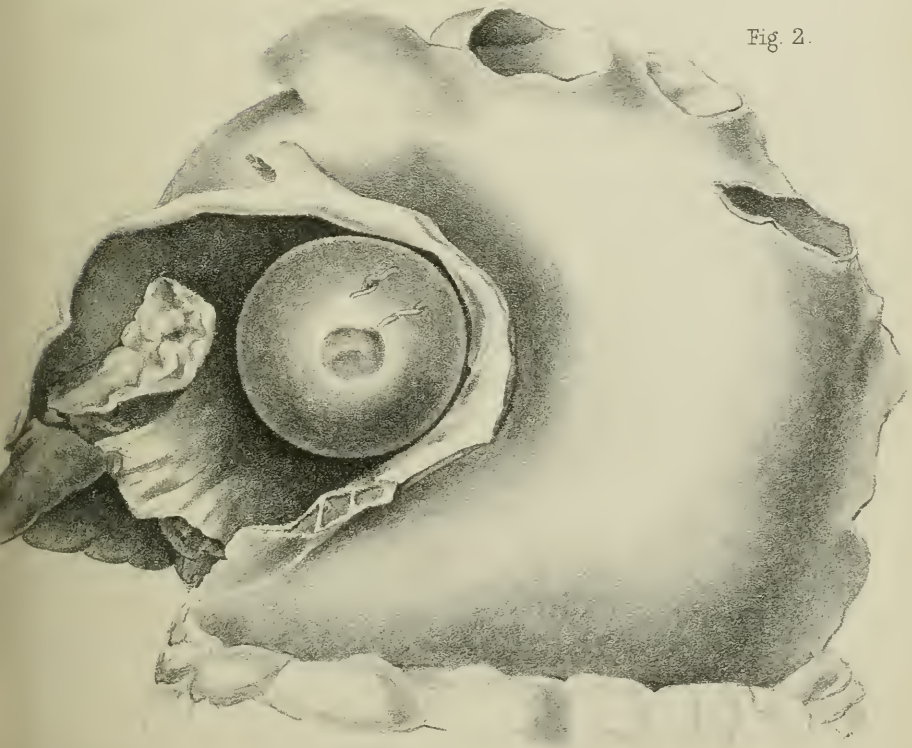


Fig. a.

Fig. 2.



Dr Westmacott del.

W. West lith.r

In connection with the above case, Dr. Ogle mentioned the following similar one, which exists in the St. George's Hospital Museum; and exhibited a microscopical preparation of the specimen.

Case II.—*Epithelial excrescences from the inner surface of the larynx.* —These were connected chiefly with the inferior vocal cord of each side, but to a slight extent also with the upper cord of the right side. The chink of the glottis was almost entirely blocked up by the growths pressing inwards, and meeting each other; they could, however, easily be separated.

Microscopical examination.—After immersion in spirit for many years, the growth presented scarcely anything but epithelial scales, all being flattened, but of various shapes; many being like ordinary tessellated scales, whilst others were elongated in various degrees.

The mucous membrane of the epiglottis, and adjoining parts, was originally very œdematous, and that of the bronchi was very congested, and covered by muco-purulent fluid. The lungs were very emphysematous, and in places hepatized.

The preparation was removed from the body of J. L., æt. 4, who for two years previously had suffered from general dyspnœa, with croupy inspiration, especially during sleep; but his general health had been good. He had also suffered from enlarged tonsils. When admitted into the Hospital, October the 6th, 1847, there was constant noisy inspiration, which was performed with a slight effort, and was at times, especially during sleep, highly stridulous. No actual paroxysms of dyspnœa occurred, but on two or three occasions the lips were observed to be bluish. He became gradually weaker until his death, November the 8th, which was unmarked by any symptoms of suffocation.

Remarks.—Dr. Ogle observed on the early age at which in this case the patient was affected with an epithelial growth, and on the freedom from any actual paroxysms of dyspnœa, whilst the noisy inspiration which existed was remarkable as occurring chiefly during sleep.

Dr. John Ogle, *3rd of March*, 1863.

15. *Portions of necrosed cricoid cartilage expelled in coughing from a peculiarly-shaped tumour of the right false vocal cord; aphonia and dyspnœa.*

S. P., æt. 47, was sent to me on the 10th of January, 1863, from Mr. Corner of Poplar, for admission, under my care, at the West London Hospital.

He went to India and China in the last war, and caught a severe cold in the latter country, which he never perfectly got rid of. When he got back to Calcutta, he suffered from cold sweats and fever, and afterwards, general rheumatism, and became a hospital patient. Being in government service, he was invalided and sent to England; he left Calcutta on the 9th of August, 1862, and arrived here two months after. He complained of sore-throat before leaving India, and it was very sore when he arrived. Always healthy as a young man; twenty years ago, he had aphonia for a short time from cold. Has been hoarse for four months, and three weeks ago he lost his voice.

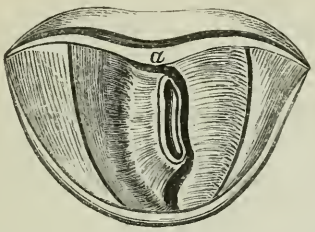
He now feels choked up, and "cannot get clear of the phlegm." Has no pain, but cannot swallow fluids without choking, some passes through the nose, and some is swallowed, about one half returns. No dysphagia with solids, but they seem to stop in his throat. He feels as though he could eat and drink well, but cannot do it, and is very thirsty at times. He whispers, but cannot talk, his breathing is noisy and stridulous, very much like Stoneham's case.* Coughs of a brassy, laryngeal sound, as if there is obstruction. Expectorates about two pints of a yellowish catarrhal sputum in the twenty-four hours. Has no night-sweats, but little sleep, being "choked up with the phlegm." Is thin, pale, and wan, pulse feeble and small. The lungs are sound, but the dyspnœa is considerable, and respiration laboured. In forty-eight hours tracheotomy would have been necessary. Laryngoscopy was difficult at first, from the irritation and general secretion. The fauces and pharynx were much relaxed and quite white; the uvula elongated. Epiglottis was sound, but much inflamed, and not covering the glottis completely in deglutition. The glottis was difficult to make out at first, but, after a while, it was seen to be nearly closed by a tumour resembling a miniature volcano, arising from a broad base on the right false vocal cord, projecting inwards towards the left side, its apex or summit being hollowed out by ulceration, and resembling a miniature volcanic crater. (*See* Woodcut 12). The left false vocal cord was swollen and extended across to the right side to meet this, thus leaving a very narrow fissure to constitute the temporary glottis. The true vocal cords were completely concealed.

The treatment varied according to the special indication, and consisted of different topical applications of nitrate and iodide of silver, nitrate of silver and mercury, tannic acid, &c. Preparations of iodine and bromine internally, gargles and good diet. In nine days the wheezing was

* Detailed further on.

gone, the expectoration less, and the health improved; he was able to eat more too. The swelling of the larynx was diminished, and the glottis wider. On the 9th of February, the voice was a little stronger,

Woodcut 12.



a, The epiglottis, below which is seen the tumour of the right false vocal cord, shaped like a volcano with a crater.

his general health wonderfully better, ate hearty, was stouter, and took walks in the grounds of the Hospital. On the 11th, he coughed up without pain or effort, a portion of the ring of the cricoid cartilage in a necrosed state. He left the Hospital for Poplar on the 12th, altogether quite a different individual, but with a weak voice.

He came to see me several times at my residence, and was examined with the laryngeal mirror; the crater was gone, but on one occasion the right false cord was œdematous, and seemingly obstructed breathing; I therefore scarified it with an instrument I had constructed, and let out some serous fluid, but as the relief was not sufficiently decided, I introduced a large bougie into the glottis three times, and freely dilated it, with marvellous relief to the breathing. On the 16th of March, he expectorated another portion of the cricoid cartilage the size of a sixpence, in coughing. He eats, drinks, and sleeps well, and has some colour. A third piece of cartilage was coughed up subsequently, and, I believe, still another piece has to come. His voice is now (May 5th), loud but hoarse, not painful; the larynx was clearer, but still with some swelling in the old situation, but the natural appearance of the true vocal cords has not been restored, but will be in a few more weeks.

This case was an illustration of the efforts of nature to expel a dead cartilage, and the means she took to accomplish this were exposed by means of the laryngoscope; in all probability, it might have had an untoward result had not the treatment been greatly aided by one's vision, which permitted of the daily use of topical means, admirably seconded by Mr. C. A. Atkins, house-surgeon to the Hospital. It is the first in-

stance on record, where the condition of necrosis of the cartilages was seen with a mirror, and also the first where the scarification of œdema was practised aided by vision, as well as the introduction of tracheal sounds which were *seen* to enter the proper channel. I have used the scarificator in some cases of acute œdema of the glottis since the occurrence of the foregoing. Dr. GIBB, *3rd of March*, 1863.

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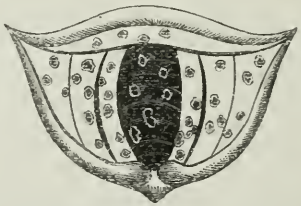
16. *Aphonia and dysphonia from tuberculous ulceration of the follicles of the epiglottis, larynx and trachea, in the first stage of phthisis pulmonalis.*

A. M., a young gentleman, æt. 17, was sent to me by Dr. John Hall Davis in the middle of December, 1862. He had been ill sixteen months, commencing with pain in the chest. Twelve months back, could not talk without coughing. The cough now originates in a sort of itching of the throat, with a squeaking attending it. His breath is short, and he can scarcely ascend a flight of stairs. Coughs and expectorates a large quantity of phlegm, especially at night. Is a delicate, strumous, tall lad, fair and pale complexion; always healthy before present illness. Has grown much last twelve months, and his appetite has failed, so that he has become a shadow. All his brothers and sisters are healthy, and father and mother are living. Deglutition is very painful, the first mouthful is quite agonizing. Voice is a laryngeal whisper, it gets better and worse; has not had his proper voice for sixteen months. He is in the first stage of phthisis.

Laryngoscopy.—Redness and congestion of the mucous membrane, with very fine tuberculous ulcers on the true and false vocal cords, and also in the trachea and on the epiglottis. (Woodcut 13). There is

WOODCUT 13.



The dark space shows ulceration of the trachea, with the true and false cords on either side, all capped by the epiglottis.

much secretion of mucus in the upper trachea. Applied a solution of

nitrate of silver on two occasions to the trachea with my laryngeal fluid pulverizer, and to the other parts with a brush, and these were sufficient to heal up all the ulcers, and improve the voice.

Dr. GIBB, *3rd of March*, 1863.

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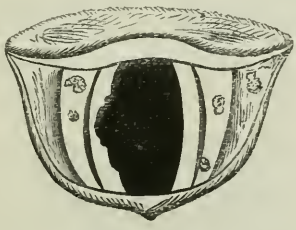
17. *Tuberculous ulceration of the larynx, especially involving the right vocal cord in a phthisical patient.*

In the following case the ulceration of the affected vocal cord was completely arrested, and the other little ulcers healed up by topical applications. Constitutional measures alone cannot be relied upon in such cases; something must be done locally as well.

C. L., æt. 38, married, and the mother of four children, came under me, July, 1862. She had been subject to chest disease for eighteen months, but had had cough for four years. She was now in the third stage of phthisis, with cavities in the upper and anterior part of the left lung, and extensive tuberculosis of the right, running into the second stage. General health bad, is much emaciated, has night sweats and hectic fever. Has had hoarseness and partial aphonia for the last seven months, with occasional attacks of pain; the throat feels raucous and sore after much coughing and expectoration.

Laryngoscopy, 28th of July.—Throat raw and very irritable, but she bore the laryngeal mirror three times. General redness of the entire laryngeal mucous membrane was noticed, with extensive ulceration of the inner or free margin of the right vocal cord, which had penetrated somewhat extensively, as shown in the sketch. The left vocal cord was

WOODCUT 14.



quite healthy. In several other places small points of ulceration were visible. The large ulcer was touched with the aid of the laryngoscope, by means of a suitably curved, large-bellied camel's-hair brush, with a solution of nitrate of silver, causing comparatively slight spasm.

In a few days the voice improved, the irritation subsided, and the ulcers were found to have healed.

In October, deglutition produced pain on the right side of the neck, mainly due to inflammation and probable dislocation of the right thyro-hyoid articulation; this part was painful, and caused a rough aphonic voice at times, from impeded motion of the parts. The laryngoscope showed the ulcer on the right vocal cord cicatrised, and with capability of action. The left vocal cord vibrated like a relaxed string.

Pain and soreness were prominent symptoms for some weeks, necessitating a second swallow to get down food. The thyro-hyoid ligament had become shortened, so that the cartilage and bone were nearly in contact. Under the use of glycerin twice a-day, and expectorant mixture of half-drachm doses of tincture of sanguinaria, she experienced great relief, and got better, and remained so for some weeks, but the pain was so severe in the right side of the neck, that my strongest fears were excited lest rupture of the ligament should ensue. The phthisical affection is so far advanced, that her existence is a question of a few months. Dr. Gibb, *3rd of March*, 1863.

18. *Aphonia following phthisis and pneumonia, tuberculous ulceration of the larynx and disease of the vocal cords.*

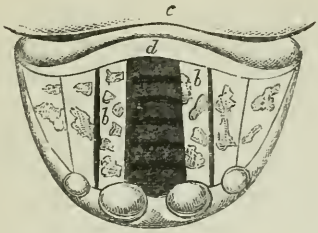
Mrs. C., a handsome, but pale, young married lady, accompanied by her husband and Mr. F. B. Pearse, of the Maldon Road, her medical attendant, consulted me in the latter part of January, 1863.

She was pregnant four months with her first child. Two years ago she had an attack of pneumonia at Bristol, and remained delicate after it. In December, 1861, her voice began to fail and went gradually away, so that for the last twelve months she has spoken only in a whisper. Has a severe cough and expectoration of purulent mucus, with pain in the larynx, throat, and ears. She was in the second stage of phthisis.

Laryngoscopy was difficult, from her nervousness and irritability of the fauces; I held out the tongue myself. The epiglottis was intensely red, the mucous membrane of the fauces much relaxed, the velum was drab, the uvula long, and the tongue found of a drab colour. The interior of the larynx down to the cords was congested, and the membrane ulcerated, even upon the cords themselves, to their very edge, but there was no loss of substance. These ulcers were tuberculous (*See* Woodcut 15). Beyond the trachea I could not see, but so delicate was the patient that

she fainted away during the examination. The aphonia was due to the ulceration of the larynx, and thickening of the vocal cords.

Woodcut 15.



b, Vocal cords ulcerated. *c*, The tongue. *d*, The epiglottis.

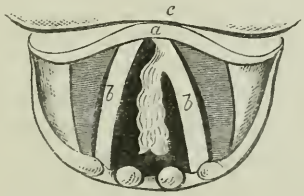
I prescribed a course of treatment which Mr. Pearse approved of, including topical measures, and I am in hopes that the voice will be restored, if it is not already so, and the general health much improved.

Dr. Gibb, *3rd of March*, 1863.

19. *Spontaneous expulsion of an elongated polypus from the left vocal cord.*

The subject of this was a young lady, whose voice had been affected for ten years, but not lost, after singing the higher notes. In March, 1861, the glottis was pear-shaped from imperfect action of the anterior part of the vocal cords. This condition, due to probable paralysis, disappeared, and the glottis became oval. In May, 1862, she was seen with me by Professor Czermak, when a number of little tubercular bodies were observed on the edge of both cords like a row of small beads;

Woodcut 16.



a, The epiglottis. *b*, The vocal cords; the left gives origin to an elongated polypus. *c*, The tongue.

these disappeared under treatment, and in June the glottis opened widely, and the voice was stronger. In August three small spiculæ were noticed, two on the right and one on the left vocal cord, producing no inconvenience. In the beginning of February the appearance was presented, as seen in the drawing, of an elongated growth, originating from the anterior part of the left vocal cord, and about two-thirds of its length running parallel to both cords from before backwards. It did not hang downwards into the trachea, and when the glottis was closed it lay over the fissure. It had formed in five months. In the first week of March the pedicle of attachment, which was small, became strangulated one evening, and permitted of spontaneous expulsion, thus obviating the necessity of its removal by operation.

Dr. Gibb, *17th of March*, 1863.

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20. *Carcinoma of left lung, with secondary deposits in heart, kidneys, supra renal capsules, and intestines; and recent pericarditis.*

C. R., a man, æt. 31, was admitted into the Victoria Park Hospital, under the care of Dr. Edwards, on the 20th of February, 1861. He stated that he had been healthy up to seven months before, and that his illness commenced with cough, &c. When admitted he complained of cough and expectoration, but he had never spat blood. His pulse was 112, small and feeble. He had a fair appetite, his bowels were confined, and the lower extremities somewhat œdematous. The whole of the left side was dull on percussion, and the respiratory sounds were only heard to the left of the spine posteriorly; the vocal vibration was feebly felt on that side, but the intercostal spaces were not obliterated. The heart was not materially displaced to the right. A small swelling of a somewhat elastic feel was situated in connection with one of the left lower costal cartilages. The symptoms and physical signs were supposed to indicate the existence of a medullary sarcomatous growth in the chest. On the 14th of March a gland under the jaw had become much enlarged, and a decided pericarditic friction sound was heard. He also occasionally expectorated large quantities of pus, mixed with blood. These symptoms continued, and he died exhausted on the 31st of March. There was not any bronzing of the surface, but his complexion was somewhat dingy.

The left lung was universally and firmly attached to the parietes, and the substance of the lung was of a deep blue or black colour mottled with white, and was infiltrated throughout with small irregular cavities

filled with pus. There was a layer of recent lymph on the surface of the heart, with some nodules of carcinoma under the attached pericardium; and similar masses existed beneath the endocardium. There were also carcinomatous deposits in the coats of the intestines, the gall bladder, in one of the kidneys, and in the bronchial and cervical glands. One of the supra renal capsules was entirely destroyed, being converted into a medullary sarcomatous mass as large as a pullet's egg. The other was similarly diseased, but still displayed some slight remains of its natural structure at one part. The fluid from the carcinomatous masses displayed under the microscope characteristic cancer cells. Dr. Peacock, *7th of April*, 1863.

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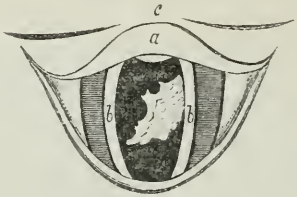
21. *Impaction of a piece of walnut-shell below the glottis, seen by the aid of the laryngoscope.*

Up to the time of my examination of the little patient who was the subject of the following case, there was no record of any instance of the lodgment of a foreign body in the larynx being verified by the laryngoscope, and therefore proved by actual visual evidence. It is fair to assume, therefore, that it is the first instance wherein this new appliance was made use of for the diagnosis of an impacted substance.

Through the kindness of Mr. J. W. Turner, of Lower Phillimore Place, Kensington, I was requested to examine with the laryngoscope, a lad of 13, the son of Captain C., on the 19th of November, 1862. Some months before he got a piece of walnut-shell lodged in his larynx, when at dinner with the family, and after six months of occasional paroxysms of cough, he had a severe attack of laryngitis, which necessitated the operation of tracheotomy, which was skilfully performed by Mr. Paget. This at once relieved the urgency of the symptoms, yet did not effect the removal of the offending cause, which Mr. Turner believed must be still lodged in the sacculus of the larynx. I employed the laryngoscope with the patient sitting up in a chair near the fire, and had a good view of the parts, the mirror being very well borne against the uvula. At first there was spasm and resistance, but this wore off, and the larynx was found to be clear of obstruction above the vocal cords, which were mostly approximated. A curved canula passed through the tracheal wound from below upwards readily felt a foreign body, manifest both to Mr. Turner and myself. Its position was shifted, and another view was taken of the larynx, and this time one end of the walnut-shell could be distinctly seen below the vocal cords, projecting in

the middle, across the rima from left to right, as represented in the engraving drawn at the time. Several efforts were made to dislodge

Woodcut 17.



a, The epiglottis. *b*, The vocal cords, with the piece of nutshell between, projecting across the glottis from left to right. *c*, The tongue.

it from below without success, but its position must have again become changed, for it could not again be seen from above, chiefly owing, however, to closure of the glottis. It was apparently jammed in the subglottic space, and could not be detached, even although the patient was under the influence of chloroform. We thought it prudent not to interfere further for the present. The ashy-grey appearance of the foreign body, as if bathed in secretion, was very striking.

On a subsequent occasion Mr. Paget enlarged the wound upwards, and passed his finger through the glottis from below and also from above, and felt no body then remaining. In conversing with him about the case about the middle of January, he coincided with me in the opinion that it had been coughed up before the second operation, and probably swallowed.

Addendum.—I learnt a few days ago from Mr. Love (21st of May) that the wound had perfectly healed, and the young gentleman was never in better health in his whole life than at present.

Dr. Gibb, *21st of April*, 1863.

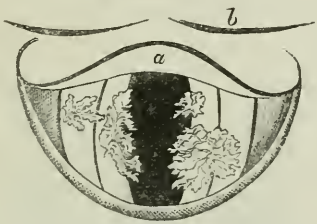
22. *Organic aphonia from foliated epithelial growths on the true and false vocal cords.*

A young man, æt. 24, a worker in precious stones, came under my care in July, 1860. He had gradually lost his voice twenty-two months before, and could utter only a very low laryngeal whisper. Sometimes for days together there was complete dumbness. Whispering was usually associated with great pain, straining and tightness of

the neck, referred particularly to the thyroid cartilage; general health bad. He had contracted syphilis three years ago, with secondary eruption and sore-throat. A little mirror was used to look at the deeper parts of the throat, and I was enabled to see the laryngeal surface of the epiglottis. It is figured in my work on the throat at page 34, in the chapter on lesions of that cartilage.

It was not, however, until October, 1860, that I examined him in the regular way with the laryngoscope, and made out the nature of his complaint. Warty growths of a foliacious form were discovered about the true and false vocal cords. One large and broad nearly covered the posterior third of the left true and false vocal cords, overlapping the free border of the true, whilst a smaller was situated more anteriorly on the free border of the true cord. The free border and part of the surface of the right true vocal cord was in connection with a long growth, and a smaller one occupied the anterior part of the right false vocal cord. These are shown in the figure.

Woodcut 18.



a, Epiglottis. *b*, Back of the tongue.

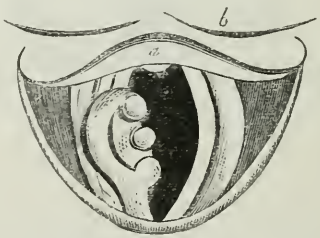
The glottis could not close, and therefore voice was extinguished. The treatment consisted in the topical application of solutions of nitrate of silver and argento-nitrate of mercury on many occasions. Small doses of bichloride of mercury and iodide of ammonium were given internally. The growths gradually shrivelled up and were wholly absorbed, and the mucous membrane assumed its natural condition, as well as both true vocal cords. The whisper in the meantime became gradually louder and louder, until the voice returned in about five months, and in two months later he was perfectly cured.

The growths, I believe, were solely confined to, or originated upon, the mucous membrane, and were specific in their nature, although not necessarily so. Dr. Gibb, *21st of April*, 1863.

23. *Organic aphonia for five years, from a tumour on the right vocal cord.*

A young lady, æt. 29, came to me, accompanied by her aunt, in August, 1860. Her general health was good in every respect, excepting that she had a violent attack of cold with sore-throat, followed by hoarseness six years ago, and after the lapse of a few months the voice became gradually extinguished, so that a whisper was reduced to absolute dumbness. Yet on two or three occasions the whisper returned, but to again disappear. She had consulted many men of eminence, who looked upon her complaint as hysterical, and she was treated accordingly, without any or the slightest benefit. At times dyspnœa was distressing and her health suffered, but the aphonia had existed for five whole years. Local and general treatment produced some slight benefit only. On the 24th October, 1860, she was submitted to laryngoscopy, when the cause of the aphonia was at once revealed: for a large, nodulated, and somewhat oval tumour occupied nearly the whole of the right vocal cord, encroaching upon the false cord, and protruding across the glottis (*See* Woodcut). It was red and fleshy, and quite

Woodcut 19.



a, The epiglottis. *b*, The tongue. The tumour is seen on the right vocal cord.

immoveable, whilst the left vocal cord was white and slightly moveable, and bent outwards. Nothing else was noticed beyond general congestion of the throat and trachea. Of the nature of the tumour it was then impossible to say, but as it had existed for some years, in a comparatively young person, it was not malignant.

The treatment varied, being chiefly iodide of ammonium and tincture of iodine, occasionally associated with sanguinaria and nux vomica. Topical applications were persevered in with regularity and frequency,

by the aid of the laryngeal mirror, of nitrate of silver, nitrate of mercury and silver, sulphate of copper, tannin, etc. The second appeared to do the most good, for in a little time the growth began to get smaller, and by degrees absorption went on, until there was little or none of it remaining. Coincidently with its decrease the whisper became stronger, the voice increased in tone and intensity, until it became natural. The cord now acted well and met its fellow, and the remains of disease quickly disappeared as the voice strengthened. The mucous membrane of the cord remained red for some time and then disappeared, and, beyond some slight irregularity of the surface, it was of proper width and colour. My impression now is, that the growth was originally follicular, and confined to the mucous membrane, possibly an agglomeration of several enlarged follicles, for the reason that the natural condition of the cord was preserved.

Dr. Gibb, *21st of April*, 1863.

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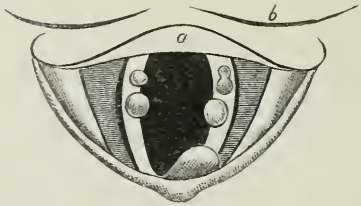
24. *Organic aphonia for three years, from tumours on both vocal cords.*

H. B., æt. 22, resided in Essex, came to London, and was treated for consumption at one of the Hospitals. She had lost her voice for three years, and was given cod-liver oil, steel, and the neck and chest were blistered numberless times. She had a slight cough, but she said her throat caused it. She spoke in a low whisper, and its laryngeal softness and tone at times gave the belief that she was suffering from ulceration of the follicles of the larynx, especially as there was some follicular disease of the pharynx. The catamenia were regular. General health middling, but she did not look phthisical. The most careful examination failed to detect any pulmonary disease. The laryngoscope was used on the 27th October, 1860, and several tumours were found on the surfaces of both vocal cords, two on the anterior half of the right, both slightly overlapping the edge of the cord; and four on the left, the largest situated at its posterior part close to the arytenoid cartilage; another smaller was on the middle of the cord; these two, especially the former, overlapped the edge of the cord; whilst two very much smaller lay on the surface, on the anterior third of the cord. All these are seen in the drawing.

These growths were regularly touched with various applications, and one by one gradually disappeared; in the interim the voice was slowly returning, but it was not until nine months after laryngoscopy was first

practised that the remains of the last and largest growth had com-

Woodcut 20.



a, The epiglottis. *b*, The tongue. The tumours are seen on both vocal cords.

pletely disappeared, when the voice assumed its full and natural compass and power. Dr. Gibb, 21*st of April*, 1863.

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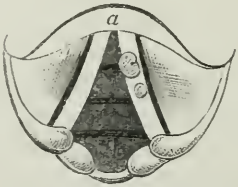
25. *Varying aphonia from two small congested growths on the surface of the left vocal cord.*

The subject of this was a young lady æt. 20, supposed to be phthisical, who came to me on the 2nd of November, 1860. Her voice was weak, at times reduced to a whisper, for the period of eighteen months. General health good.

Laryngoscopy showed two swellings or tumours of a deep crimson colour upon the surface of the left vocal cord; one was situated near its anterior third and projected over the free edge of the cord. Although these did not interfere with its action, they nevertheless impaired phonation. The drawing gives an accurate view of them.

Woodcut 21.



a, The epiglottis. The two tumours are seen on the left vocal cord.

She was treated for three months by the local application of various solutions, and the internal use of the iodide of ammonium, when the

growths disappeared, the voice being restored to its usual power and strength without any further attacks of weakness or aphonia. I have no doubt that these took their origin in two of the follicles of the mucous membrane.

The four cases of aphonia just detailed were some of the very first in which I used the laryngeal mirror, and they will illustrate its value both for diagnosis and treatment. Dr. Gibb, *21st of April*, 1863.

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26. *Disease of the turbinated bones and floor of the right nostril, with exudation of fibrine; and disease of the throat.*

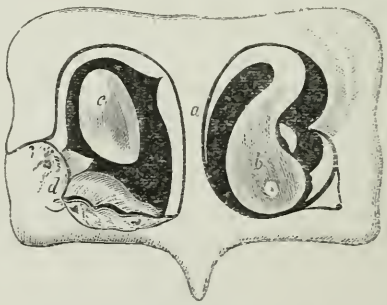
A married lady, æt. 35, without family, from the county of Worcester, consulted me by letter, in April, 1862. She had had disease of the throat for twelve years, commencing with mumps. The tonsils and uvula became diseased, and the former were removed. It is in the right side of her throat where she suffers great pain, and an ulcer there, she says, "leads up into her head." The pain in the head and throat is at times more than she can bear; it used to be very severe over the frontal sinuses; she has likewise a great discharge from the back of the throat, copper-coloured from the head, and almost black from the lower part of the throat, and it appears to her to gather in the nose and head. The right side of the throat feels raw, there is dryness of the fauces and soreness of the chest. When the frontal pain is present she is a great sufferer. Had been under some eminent men without relief, nearly all of whom had evidently treated her for neuralgia, from the nature of their prescriptions.

In the latter part of June she came up to London, and I carefully examined her. She seemed in good condition of body, pale, and suffering from neuralgic pain in various parts of the face and head, on either side of the nose, but especially on the right side, which was tender on pressure. Pain was present behind the lower jaw on each side, in the right side of the chest, between the shoulders, and elsewhere. Breathes clear through the left side of the nose, but not the right, although she feels no obstruction; has always a tightness running up into the head; little bloody discharge from the nostrils, and two pieces of thick discharge come daily, working down from the back of the throat; this has been so for three years, and she gave me a vial full of lumps as big as a pea and upwards, which, on examination proved to be masses of fibrine. A recent specimen was expectorated in my presence. Her breathing is free, but when she is just falling off to sleep at night it is suffocating.

Inspection.—Pharynx covered with a dryish and grey secretion at its back part. Membrane on right side, running up and down, is very red, raw, and ulcerated. Back of tongue is fissured, nodulated, and deeply ulcerated. Base in front of epiglottis not diseased. Epiglottis hangs over the glottis and lies nearly flat, preventing a view into the larynx with the mirror, unless during a sudden inspiration. It is very thin, with small serrated margins, colour altered. The position of this cartilage explained the sense of suffocation at night from extreme relaxation of its proper ligament.

Rhinoscopy.—General bright redness of the membrane at the back of the right nostril was seen the result of inflammation, with a large ulcerated projecting mass on the floor, and a smaller to the right of it, covered with secretion of a yellowish and pink colour. The turbinated bone was partially destroyed, and covered with inflamed membrane. The ulceration of the floor of the nostril extended to the velum and right side of the pharyngo-nasal cavity. The left nostril, although congested, was otherwise normal. The extent of disease can be understood on comparing the two nostrils in the annexed drawing. The right nostril

Woodcut 22.



a, The posterior nasal septum. *b*, The superior turbinated bone of left side. *c*, The remains of the same bone of the right side. *d*, Ulcers and granulations on the floor of the nostril.

is the left in the picture. A red projecting swelling was seen in the right nostril from the front, probably continuous with that behind.

The physical signs pointed to commencing disease of the chest; there were fine mucous râles heard posteriorly between the shoulders, puerile breathing in the left chest, and indistinct in right.

I carefully applied a solution of the argento-nitrate of mercury to the

back of the throat and the nose, with most marked benefit, for immediately the pain in the latter was relieved.

The treatment consisted of remedies internally besides local applications, and her improvement was slow and gradual, and for some time she wonderfully improved, but was very liable to accessions of cold and cough.

Although I have not heard from her now for some weeks, I have every reason to believe that the ulceration of the nose has healed, and the inflammation subsided, and that she is free from the pains to which they gave rise. The case was most satisfactory, in that the diagnosis was clearly made out by the rhinoscope, after a long period of uncertainty as to the nature of the complaint.

Dr. GIBB, *21st of April*, 1863.

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27. *Case of inflammatory croup. Tracheotomy. Death after twelve hours.*

— W., æt 5 years, a stout boy, was attacked with croupy breathing, three days before I saw him. He was brought to me early on the morning of the 2nd of May. His croup symptoms were then urgent. I ordered frequent doses of tartar emetic and other treatment. At midday his condition was worse, he was evidently sinking. He could scarcely cough, and was very restless; his face pallid and bluish, his extremities somewhat swollen and dusky, the surface of his body coldish.

Opening the windpipe seemed the only chance for the boy. Accordingly I did so, at three P.M. After some considerable difficulty, I got in a bivalve trachea-tube, and good breathing was soon established, although he had almost ceased to breathe before it was accomplished. It was soon evident that the instrument was becoming choked with tenacious phlegm. By introducing the end of an elastic catheter a time or two, and frequent mopping and oiling, very good breathing was secured. I left my patient at half-past ten P.M., had him still carefully watched, he recovered in every respect, and took plentifully of nourishment. At about five a sudden choking or stoppage of the tube occurred, and he died in the struggle.

I now believe that, had I selected the double canula in place of the one I used, my patient would have had a very good chance indeed of recovering.

The specimen shows a false membrane closely adhering to the under

surface of the epiglottis, and dipping into and lining the laryngeal cavity. The mucous membrane about the cordæ vocales is swollen, and the natural opening very much narrowed by these conditions. Further, there is seen a great accumulation of muco-purulent discharge, adding the last pound to break the camel's back. Dr. Martyn, *5th of May*, 1863.

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28. *Total loss of the epiglottis, with aphonia from ulceration of the larynx and pharynx.*

In October, 1862, a lady consulted me from one of the Western counties, accompanied by her son and daughter. She was æt. 56, the mother of ten children, and of delicate health. She was very well from June to November, 1861, when she had a relaxed sore-throat. A solution of caustic was applied in April, 1862, and afterwards the solid substance. Her illness when I saw her had been of twelve months' duration, with loss of voice since April, over six months. She has had ulcer of the fauces, for which the solid caustic has been rubbed round and round in the form of a complete circle, *i. e.*, the diameter of the faucial space. Was never without ulcers, she said, until she commenced to take bismuth and henbane, a month ago. Stomach is often out of order; she is very nervous and easily agitated, and has spat up latterly sometimes a quart of mucus in the twenty-four hours.

She is very pale, and speaks in a low but distinct whisper, and gave me the particulars of her case herself. Has no cough nor chest symptoms; can swallow fluid but not solid food; throat at times painful, with pricking of the fauces in the right side. Tongue is constantly covered with a thick, white, creamy fur along the back and sides, the tip is clean and pink.

Laryngoscopy and inspection.—So irritable was the throat that my examination the first day was unsatisfactory, but both on it and the second day (17th and 18th) I contrived thoroughly to see all the parts. The mucous membrane of the fauces was bathed in a profuse secretion, especially the first day, the membrane was sensitive and extremely congested. A large, deep, and irregular ulcer occupied the middle of the back of the pharynx, and could be seen only by depressing the tongue with a depressor. Another was present in the right side of the pharynx, laterally; seen with the laryngeal mirror—this one gave rise to the pricking pain. Several other smaller ulcers were scattered here and there.

The epiglottis was wholly destroyed down to its root, leaving the merest trace of its presence. The first day there was a granulation on

its left border which disappeared by the second on the use of a proper gargle. The membrane of the interior of the larynx was red, œdematous, swollen and irregularly prominent, as seen in the drawing. The

Woodcut 23.

a, The remains of the epiglottis. *b*, The back of the tongue. The dark space represents the glottis.

white colour and shape of the cords were gone. The trachea could be seen with streaks of white lymph-like secretion. The parts moved freely, the aryteno-epiglottidean folds were partly ulcerated, but otherwise sound, as also were the two little cartilages, permitting of complete closure of the larynx during deglutition. There was no feeling of suffocation at any time—a noteworthy fact.

The effect of an astringent and soothing gargle the first day was a diminution of the secretion, and subsidence of the irritability, producing a more healthy pink colour of the membrane generally; but this was partly due to a solution of the iodide of silver, freely applied the first day. On the second day I carefully applied a solution of nitrate of silver to the interior of the larynx, and to all the ulcers, especially that in the middle of the pharynx, by means of a soft brush. Suitable constitutional and local measures were prescribed, the diet regulated, and a hopeful prognosis was given. In two months she had greatly improved, her throat was comfortable, and it seemed cured. One month after she saw me she wrote on the 16th of December. "The expectoration was much lessened, the general health greatly improved, appetite doubled, meat acceptable, which she had not touched for months. Voice returning; she does not whisper, yet the sound is croaky. Ulcers all healed up." The vocal cords were subsequently seen by her son; and as I have not heard from her for some months, I expect her recovery has been complete, with full power of swallowing although the epiglottis is irrecoverably gone. Dr. Gibb, *19th of May*, 1863.

29. *Destruction of the epiglottis, aryteno-epiglottidean folds, arytenoid cartilages and vocal cords; incurable aphonia.*

A. S., æt. 24, called on me the 7th of November, 1862, with a letter from Dr. Maxwell T. Masters, of Peckham, who kindly sent him to me. Always healthy until his return from Australia, three years ago; consumptive on his mother's, and asthmatic on his father's, side; father alive, aged 70. All his brothers and sisters, six in number, are alive. Present illness commenced with a cold on board ship when he had on one occasion to bale out water, and got very wet. The throat became sore, two years ago, when he could scarcely swallow even milk, and he was a patient in the Consumptive Hospital, Brompton, for six months; he was told he was not consumptive. The throat gradually got worse; eight months ago a fit of coughing came on which was followed by hoarseness and gradual aphonia, which has continued to the present time.

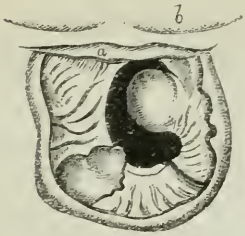
He has no pain, but in swallowing it tickles him at the back and roof of his mouth, which, if not carefully managed, suddenly regurgitates through the nose, unless his food is pultaceous. Large lumps of bread sometimes actually pass through the nose; fluids he cannot swallow, not even his saliva. Five months ago he was nearly gone, and has passed through attacks of terrible misery and suffering with his throat. Is not so much emaciated the last two months.

He now breathes with a loud noise, somewhat of a snoring character, as if he was asleep; has occasional croupy cough, no dyspnœa, dysphagia nor pain; speaks in a loud whisper; pulse 116, weak; respiration 20 per minute.

Laryngoscopy showed the most fearful ravages. The uvula was almost gone, the velum was adherent posteriorly to the pharyngeal wall, and left a shallow passage towards the right side passing upwards to the nostrils behind. The epiglottis was wholly gone, and the aryteno-epiglottidean folds were mostly destroyed, their remains being transformed into fleshy tubercles surrounding the crescentic glottis, as represented in the woodcut. The arytenoid cartilages were gone. There were no vocal cords, but a sort of glottis remained, formed by folds or edges of the cicatrices of the destroyed mucous membrane, and expanding to a small degree with some slight movement during forcible inspiration. Everywhere great ravages were visible, and for fearful destruction of the parts it was one of the most terrible cases that has come under my notice.

This patient had syphilis when a younger man, and although he

Woodcut 24.



a, The root of the epiglottis. *b*, The tongue. The black, crescent-shaped glottis is surrounded by the remains of the aryteno-epiglottic folds.

denied it, I suspected a second attack from the occurrence of an eruption and other symptoms when on board ship.

Treatment was of course palliative, and he so improved that a more healthy state of the membrane of the larynx was brought about; heretofore it had been of a drab colour, it now changed to a pink. The breathing continued very noisy, and he had to expectorate frequently. In December, 1862, I exhibited him, with others, before the Medical Society of London, and I then lost sight of him. In February last, Dr. Masters wrote to me to say that he was carried off by an attack of bronchitis, such as he had, to his knowledge, frequently been subject to. No *post-mortem* examination was made. Thus ended the unfortunate case which might have been attended with much more comfort to the patient had his constitution been better, and the laryngeal consumption less extensive than it was. Dr. Gibb, *19th of May*, 1863.

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30. *Warty growth of larynx.*

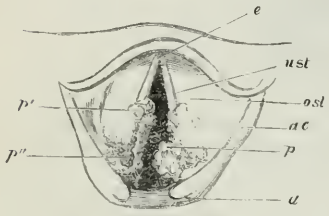
Mr. S., a merchant in a small town in Bohemia, æt. 25, formerly always in good health, lost his voice at Easter, 1860, suddenly in one night without any apparent reason.

No treatment whatever had any effect.

On the 14th of January, 1862, the patient came to me, and asked for an inspection with the laryngoscope. I found three cauliflowerlike excrescences upon both vocal ligaments of the right side, and the left upper vocal cord. The true vocal cord of the left side, as far as it was uncovered by the new growth at the latter, was normal.

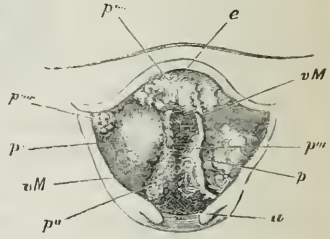
About a year later, on the 9th of December 1862, I saw the patient again. His voice had considerably improved, though the excrescences in the larynx had augmented in number and size. The improvement of the voice was evidently due only to an alteration of the shape of the new growth. The laryngoscopic image I got was the following:—

Woodcut 25.



e, Epiglottis.
u s t, Inferior vocal cords.
o s t, Superior vocal cords.
a e, Posterior surface of the larynx.
a, Arytenoid cartilages.
p, The warty growth on both vocal cords.

Woodcut 26.



e, Epiglottis.
v M, Ventricle of Morgagni.
a, Arytenoid cartilage.
p, The warty growth.

The larynx was almost obstructed by these excrescences, and I was now induced to remove them. To that end I employed the new method of local treatment, by the aid of the laryngoscope, which I suggested already in 1858, and first executed in February, 1859. My method consists in placing the laryngeal mirror with one hand against the uvula, and in introducing the instrument with the other hand into the larynx, guided by the eye which sees not only the diseased spot, but also the instrument itself.

In the case in question, I succeeded in removing a great part of the new growth by means of a simple forceps; first, that one which arose on the back surface of the epiglottis, and then parts of those which were attached on the vocal cords.

As to the nature of the removed new growths, microscopic investigation shows that they consist entirely of epithelial cells, and a few ramifications of capillary vessels.

Dr. Gibb, for Professor Czermak, *19th of May*, 1863.

31. *Larynx of a child affected with diphtheria chiefly involving the epiglottis.*

The specimen was sent to me by Dr. Henry Davis of Putney, who informed me that the patient was a child, æt. 10, rather delicate, with chronic enlarged tonsils which occasionally inflamed. She had lassitude, and sore-throat before he saw her on the Friday night before death, (which was on the following Monday). At that period there was a distinct diphtheritic patch on each tonsil, no dysphagia nor dyspnœa; but slight fever. The next day the child seemed better; on Sunday she had occasional fits of spasmodic choking, somewhat resembling pertussis; there was a croupy noise on inspiration. Next morning, at 7 A.M., she was gasping for breath and livid, the pulse rapid and small, great dyspnœa, and every symptom of impending suffocation. The patches on the tonsils had nearly disappeared, with extension of the disease to the epiglottis and larynx. Mr. Shillito now saw her. At the request of the parents, tracheotomy was performed, without the loss of a teaspoonful of blood. The relief was great, no severe paroxysm occurred after, but she gradually sank in about five or six hours, in a semicomatose condition, without any apparent suffering. The lungs were healthy and collapsed, and but slightly congested in the posterior part; the trachea and bronchi highly injected and filled with mucus, without any diphtheritic patches. In the larynx, however, they were noticed, especially above the vocal cords, and affecting particularly the upper part and sides of the epiglottis, where the mucous membrane was in a state of ulceration. The back part of the tongue seemed swollen and inflamed.

Dr. GIBB, *19th of May*, 1863.

III.—DISEASES, ETC., OF THE VASCULAR SYSTEM.

1. *Rupture of one of the branches of the median colic artery.*

G. L., a stone-mason, æt. 50, had been a healthy but not very temperate man. About a month previous to his death, slight anasarca came on, and for this he was under medical treatment. On the evening of the 18th February, 1859, immediately after his return from work, he fell off his chair as if intoxicated, and on being lifted up was speechless, and the right side was observed to be helpless. When admitted, half-an-hour subsequently, his face was slightly flushed, his pupils con-

tracted somewhat, and insensible to light, his breathing stertorous, his pulse 76, and full. The right side was colder than the left. He seemed perfectly unconscious, but was restless. Croton oil and calomel were administered, and the back of his neck was painted with the liquor vesicatorius. He continued in an apoplectic state, and died on the evening of the 21st.

Post-mortem examination.—Body in good condition.

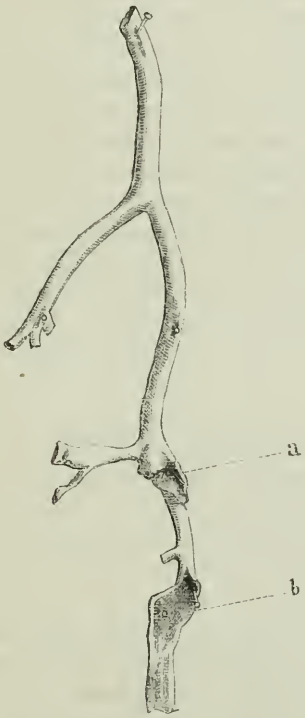
Head.—Calvaria and dura mater healthy. The surface of the brain was not congested, and it presented a moderate amount of sub-arachnoid fluid; but beneath the cerebellar arachnoid (chiefly behind and on each side of the pons Varolii) there was a little purulent exudation. The vessels at the base, with the exception of a few atheromatous patches, were healthy. The under surface of the left middle cerebral lobe was very protuberant, and fluctuated. On incising the cerebrum, a large, recently-formed cavity was found in its left hemisphere, occupying chiefly the anterior and middle lobes, but extending partly into the posterior lobe, and communicating freely with the lateral ventricle by an extensive lacerated opening, immediately external to the optic thalamus and corpus striatum. The whole of the space thus produced was filled with recent dark-coloured coagulum; and the surface of that portion of it formed by laceration was flocculent, and studded, to a depth of between one-fourth and one-half inch, with punctiform extravasations. The right lateral ventricle was displaced to the right, and contained a little bloody serum. An old apoplectic cyst, as large as a hazel-nut, was discovered in the right corpus striatum. The rest of the brain was healthy.

Chest.—Pericardium and heart healthy. Cavities of heart nearly empty. The pleuræ presented old adhesions, and contained from a pint to half-a-pint of serum each. The lungs are large, slightly emphysematous along the margins, and crepitant throughout. They presented much black pigmentary deposit, both throughout their substance and on their surface, and in the latter situation were studded with numerous cartilage-like spots. Bronchial tubes, larynx, and trachea healthy. Some of the bronchial glands were much blackened, and some contained masses of earthy matter.

Abdomen.—On opening the abdominal cavity it was found to contain about a pint and a-half of deeply blood-stained fluid, and a few soft, dark-coloured clots. A little recent coagulated blood was observed in the gastro-hepatic omentum, and along both curvatures of the stomach, and a little also was contained in the substance of that portion of the great

omentum which belongs to the stomach. On lifting up the omentum, the transverse colon was found to be concealed by an accumulation of blood, which distended the whole of the transverse meso-colon, so as to form of it a tippet-like mass about two inches thick and three or four inches deep. The accumulation of blood was prolonged backwards from this so as to surround the pancreas and third part of the duodenum, and to encroach upon the upper part of the mesentery. It extended also, anteriorly, between the posterior layers of the great omentum; and downwards, in the substance of the right meso-colon as far as the cæcum, and in the substance of the left meso-colon as far as the pelvis, forming in each of these latter situations a mass of clot from one inch to one and a-half inches thick. It invested also the upper halves of both

Woodcut 27.



kidneys. Liver pale, but healthy. Spleen of usual size, pulpy. Stomach, intestines, and supra-renal capsules healthy. The kidneys

were of usual size, and very pale, but their surfaces were studded with small hæmorrhagic spots closely resembling fleabites.

Under the microscope, many of the Malpighian bodies were found atrophied, and many of the convoluted tubules were seen loaded with extravasated blood.

The aorta and the trunks of the large vessels springing from it were perfectly healthy. The branches of the cœliac axis and superior mesenteric artery were carefully traced, and found generally healthy. But in one of the primary arches supplied by the superior mesenteric to the colon, was a portion about half-an-inch long, which was distinctly dilated, of which the walls were thickened, opaque and somewhat friable, and in which a large, irregular lacerated opening (*a*) existed. There was a little adherent fibrine within the vessel in this situation. An inch or two from this opening was another portion of artery (*b*), in which also the walls were much thickened and atheromatous.

The above case affords a rare and interesting example of aneurismal dilatation and rupture of one of the branches of the superior mesenteric artery. The simultaneous occurrence of this lesion and of hæmorrhage into the substance of the brain is curious; but there can be little doubt, I should think, that the explanation of it is that the patient was, in the first instance, attacked with apoplexy, and that the abdominal complication was the result of some violence, either at the moment of his fall or a little subsequently to that event. The hæmorrhage into the renal tubules was probably the effect of cantharides absorbed from the blistered surface, made just after admission by the application of liquor vesicatorius. Dr. Bristowe, *4th of November*, 1862.

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2. *Case of embolism.*

The specimen came from a man who died under Dr. Wilks's care, in Guy's Hospital, of disease of the heart and gangrene of the leg, arising from obstruction to the femoral artery. His previous history was furnished by Mr. Bisshopp, of South Lambeth, to whom he first applied for advice, and was as follows:—

"E. W., æt. 32, a gentleman's coachman, of steady, temperate habits, consulted me on the 25th of March, for a painful and deep-seated swelling in front, and just below the bend, of the elbow, and which had come spontaneously within three days; it had the appearance of an abscess forming deep among the muscles. He was compelled to give up work for a time, but in the course of three weeks the swelling having

subsided, he was able to resume it. He continued in his usual health until the 5th of June, when he again came to me for pain and swelling in the left knee-joint and muscles of the calf, and which almost prevented him from walking. The man appearing very ill, his chest was examined, when a loud systolic murmur was heard all over the front, from which I inferred extensive arterial disease, and considered the pain he was suffering from to be an atonic form of rheumatic gout. He never remembered having rheumatism, nor any illness to cause him to lay up. The pain and swelling of the joint and muscles of the leg gradually subsided, and on the 21st of June he was again pretty well. He continued so until the 21st of July, when, for a third time, he came under my care for a swelling in the right popliteal space, and upper part of the muscles of the calf: the leg was partially bent, and the foot could not be placed flat on the ground. It was quite evident that the popliteal and tibial arteries were the seat of the disease. In a few days the swelling in the popliteal space subsided, and a deep-seated swelling formed two-thirds down the leg, and the skin became red and tense as if an abscess were about to form. The leg could not be straightened, and the foot was very cold, but not swollen, and no pulsation could be felt in the posterior or anterior tibial arteries, or in the femoral as high as Poupart's ligament. The limb also was tender on pressure in the course of the vessel. The man was getting thin, weak, and generally very ill, and was sent to the Hospital under the care of Dr. Wilks."

He was admitted on the 13th of August. He was then very thin, sallow, and with some febrile disturbance. His right leg had upon it several sores of a very unhealthy character; their edges were livid as if about to become gangrenous; the great toe also was of a dark colour. No pulsation could be felt in the arteries of the leg. A loud systolic bruit was heard over the valves, and traceable along the aorta; there was also a faint diastolic bruit. He gave no history of rheumatism. He died on the 2nd of September. The case was considered as a good example of embolism. The above history was only obtained since his death.

Post-mortem examination.—The aortic valves were found very much diseased; two of them were adherent, and at the point of junction there was a hard cretaceous mass. Attached to this there were large vegetations, soft, and easily removable. Beneath the valve there was also an ulcerated spot into which a probe could be passed into the substance of the ventricular wall, and where a cavity filled with blood existed. This cavity could be seen externally where it was on the point of bursting,

and a patch of lymph existed over it. Some purulent matter appeared to be mixed with the blood in this cavity. The femoral artery was obstructed from Poupart's ligament downward by a firm coagulum. On removing this, a portion of fibrine quite distinct, and of a different character from the rest, was found at the junction of the femoral and profunda vessels, and blocking up both arteries, but more particularly wedged into the latter. It was a firm white mass, and quite distinguishable from the more recent coagulum. From this circumstance, and from the fact of its position at the junction of the vessels, it was very rightly judged that it had been carried to that spot, and then arrested. The other vessels of the body were not examined; the history above given of their previous affection not having been received at the time of the inspection.

This case, no doubt, was an example of embolism, the femoral artery being plugged by a fibrinous vegetation carried from the heart, and the subsequent gangrene of the leg being dependent upon the obstruction. There can be little doubt also that the sudden attacks of swelling and pain in the limbs which the patient had had on previous occasions in the other limbs were due to the same cause; that is, the circulation of smaller portions of fibrine carried from the heart. This less degree of the affection, the implication of the smaller vessels for a time, is marked as a rule by a general febrile disturbance, and pains and swellings of the joints. The case before us, therefore, tends to show that the simpler cases of embolism affecting the larger vessels, and manifested by local symptoms, are probably of the same kind as those where the smaller vessels or capillaries are involved, and where the constitutional disturbance is the main fact to be noticed. In individual cases the two affections are often separated, but not uncommonly, as in the present instance, are associated, and therefore would tend to show that they are identical. In the one case a mass of fibrine being detached and locating itself in a cerebral artery, or in the vessel of a limb, produces paralysis or gangrene; in another, the fibrine circulating in smaller quantities, and causing obstruction in the smaller vessels (shown by fibrinous concretions in the viscera) brings about a fatal result by some general morbid condition of the blood.

The disease of the arterial blood may be likened to that of the venous blood in pyæmia; in the one case free disintegrating fibrine is circulating, in the other the elements of pus or inflammatory products are being carried through the system. In both cases, however, two theories exist as to the cause, the one being that the change in the blood is spontaneous,

and the other that it is caused by infection from without. In the case of the venous blood there is less proof that the disease is idiopathic than in the case of the arterial disease, for, in the former, the source is on the surface of the body, whereas, in the latter, the source is to be found in the centre of the system. It is not, therefore, so easy of discovery as in the case of an external wound in relation to pyæmia. Moreover, should the patient die, there is not unfrequently an absence of any spot in the centre of the circulation to prove that the origin of the contamination has been there. Whether, however, in either case, the blood be affected from changes within or be contaminated from a local source, the effects are analogous in two ways; first, the symptoms and death may be due to the constitutional disturbance produced by the morbid state of the blood itself, or secondly, these may be due to the local effects produced in some important organ. In pyæmia a suppuration in an important viscus may be the immediate cause of death, but, as a rule, such organic change is only an evidence of a diseased state of the blood, which has been the real element in the production of symptoms and the fatal result. So in the disease under consideration where particles of free fibrine circulate in the arterial system, although death may be occasionally due to change set up in one organ, as softening of the brain, yet it may be likewise owing to an affection of the blood itself, for we find on examination after death, the mere plugging of smaller vessels is not sufficient to account for death through impairment of any single organ. During life we have known such a case to be called pyæmia, because the patient was in a febrile condition, or in that state styled typhoid, with swelling and pain in the joints. There is, however, no suppuration as in pyæmia, either observable during life or discoverable after death. We think such a case as this, and the more decided one of embolism, should not be separated from one another, because, in the latter, death may come about from a local cause; since, in the analogous case of pyæmia, we may meet with examples of the disease without any great local changes, as well as those where death is evidently due to an acute inflammation of a particular organ.

The cause of this change in the arterial blood would require much larger space to discuss than the publication of a single case would warrant, yet herein lies the greatest point of interest. Hitherto there has been a wish, as we have already said, to separate the case of simple embolism arising from the removal of a vegetation from the heart which might have had its origin in a rheumatic attack, from those cases where no such history exists, and where, therefore, the change in the blood has

been thought to be spontaneous, arising from a condition known as hyperinosis. That such distinction exists is not very evident, since, probably in rheumatism, the very existence of vegetations is due to some such previous altered state of the blood; and therefore it can be imagined that if another cause, such as a cachexia, arising under any circumstances should induce such a condition, fibrinous depositions might take place elsewhere than in the heart. We know that instances of this do occur, and what is remarkable that they are attended by symptoms resembling those of rheumatism, as pain and swelling of the joints, with much febrile disturbance.

There can be no doubt also that the so-called arteritis of the older surgeons, so well described with its constitutional and local effects, is intimately associated with a morbid state of the blood, such as is found in the disease known as embolism—using this term as we have done in its most comprehensive sense—if indeed arteritis, and this condition be not often the same thing described under different names.

Dr. Samuel Wilks, 18*th of November*, 1862.

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3. *Blood coagulated in the femoral vein, in a case of phthisis.*

J. C., æt. 21, single, had generally good health until a year ago. He has lived in New York for the last three years, and in May, 1860, he entered the Federal army, and shortly after, caught cold and had rheumatism. Soon after this, cough came on, and has been getting worse ever since. He was admitted into King's College Hospital, under Dr. Johnson, with all the usual symptoms of phthisis, on the 14th of October, 1862.

There was œdema of both legs, especially the left, extending from the foot to the thigh, and pitting readily, and painful on pressure. The superficial veins were enlarged and full.

The disease ran a rapid course, the symptoms remaining much the same; and he died on the 28th of November, 1862.

The specimen exhibited was the femoral vein of the left leg, which was found to be plugged with coagulated blood, the vein itself not being inflamed. The same condition was found in the veins of the right leg, but to a less extent. It was supposed that possibly this coagulation of blood might be due to purulent absorption from some suppurating cavity in the lungs. Mr. A. J. Pollock, 2*nd of December*, 1862.

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4. *Obstruction of the portal vein with consequent atrophy of the liver.*

The portal vein, in this case, from two inches external to the liver to the second or third divisions within its substance, was firmly packed with decolorized fibrine. It must have been completely impervious. The fibrine was adherent to the walls of the vein, which, however, were smooth and natural. The liver was of very small size, it weighed only twenty-eight ounces. The surface had not quite the smoothness and gloss of health, and the capsule was a little thicker than natural. The gall-bladder was full of dark green bile. On section, the tissue was more uniform than is generally seen, the lobules were less distinct, and the general tint was much like that of clay. Under the microscope, the epithelial cells were seen to be fatty and shrivelled, they lay among a quantity of granular matter and loose fat. The hepatic arteries seemed more conspicuous than natural.

The spleen was much increased in size, it weighed two pounds. Its texture appeared natural, it was firm and uniform. The peritoneal cavity was distended with serous fluid. The only other morbid appearance noted was in the lower lobe of the right lung, where was a small, irregular-shaped fibrinous block, evidently of some standing.

The preparation was taken from the body of a married woman, æt. 21. She had had good health till within about four months of her death, when the belly and lower extremities began to swell. She rapidly lost flesh and strength. When admitted at St. George's Hospital, on the 3rd of September, her appearance was cachetic, the body was wasted and yellow. The abdomen was distended with fluid and flatus, and the superficial veins were very prominent. The breath was very offensive, and the whole body emitted a disagreeable odour. The tongue was dry and coated, the bowels relaxed. Effervescing saline remedies were given, and the diarrhœa was controlled by mild opiates. Small doses of grey powder were given. The belly got larger and her aspect became more pinched. She suffered from nausea, vomiting and thirst. She continued to waste, and, in spite of stimulants, sunk and died on the 22nd of September.

It is probable, that the earliest disorder in this case was a condition of system, which renders the blood apt to deposit fibrinous coagula. These were deposited, as it seemed, nearly simultaneously in the vessels of the lung and in the portal vein. Were it not for the intervening system of capillaries, it might be supposed that the block in the lung

was secondary to that in the portal vein; but it does not appear that fibrinous matter ever passes through a network of capillary vessels. It is arrested there, and consequently accumulates on the arterial side. The state of the liver is interesting as showing the atrophy consequent upon an absence of the portal circulation. The bile which still continued to be formed, must have been due to the blood of the hepatic artery, of which the branches seemed to have increased in size. The symptoms, which were observed in this case, are very much such as are usually observed in cases of the same kind, of which many have been recorded. The enlargement of the spleen is an almost invariable result.

Dr. Dickinson, *2nd of December*, 1862.

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5. *Aneurism at the base of the brain.*

The patient, a male, æt. 68, from whom this specimen was obtained, had suffered for many years from severe epileptic seizures. On a sudden, and from no apparent cause, they ceased; and for as many as eighty days he remained, not only free from their recurrence, but apparently restored to excellent health. On the eighty-first day, he fell suddenly, and presently died with all the usual symptoms of apoplexy.

Certain portions of the contents of the skull, sent me by Dr. Burrows, consisted, in addition to several fragments from the ethmoid and sphenoid bones, of a tumour of a firm consistency, situated upon the course of one of the chief branches of the middle cerebral artery of the left side. The tumour was solid in the greater part of its extent. Its inferior surface was marked by the convergence of three vessels, one of which was obliterated as it lay on the surface of the tumour. The other two opened into the interior of the tumour, and a small probe could be passed from one to the other across a cavity in the centre of the aneurism. On this vessel, then, the aneurism had formed.

Half-an-inch to the right of the point at which the vessel communicated with the tumour, there was a rent in the sac wall. The wall was here hard and cretaceous, and the rent was evidently due to the separation of the soft portion of the sac-wall from the edge of a mass of this bone-like substance. From the opening thus situated, the hæmorrhage had occurred which proved the immediate cause of the patient's death.

The mass of the aneurism was formed of laminated clots, which gave the tumour its firm, solid, character. In its lower third, was a small cavity with which the artery already described, as well the rent in the wall, directly communicated. In this portion, where fibrine clots were

wanting, the calcareous degeneration had taken place; elsewhere the sac-wall was tolerably thick, tough, and membranous.

The solidity of the tumour, the presumable arrest of its increase, the rent in its wall, and the sudden hæmorrhage therefrom, satisfactorily account for the symptoms observed during the patient's lifetime.

Mr. Callender, *16th of December*, 1862.

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6. *Rupture of the heart from direct violence.*

The specimen was taken from the body of a girl, æt. 4 years and a-half. She had been knocked down and run over by a cart. When brought to the Hospital, she was quite dead. There was no mark of injury upon any part of the body. The pericardium was found to be full of blood, which had issued from a transverse rent across the apex of the heart, which only remained attached by a sort of hinge on the anterior surface. Both ventricles were laid open. The muscular substance was torn to a greater extent than the pericardium. There was no injury to any other organ. The spine and ribs were unbroken. The microscope showed the muscular fibre to be natural.

It was obvious that the injury to the heart had been occasioned by the accident. A sudden spasmodic action from terror or exertion, even if sufficient to rupture the perfectly healthy heart of a child, which is highly improbable, could scarcely be supposed to tear both ventricles in exactly adjoining situations. Moreover, when the heart is ruptured spontaneously, it is almost always found that the rent is considerably higher up the wall of the ventricle than in the present case. It may be concluded that the cart had passed over the back of the child, and bent, without breaking, the yielding structures of the thorax, so as to squeeze off the apex of the heart by means of some prominent bone, probably a rib. The pressure must have been brought to bear upon the posterior surface, where it was evident the rupture had commenced.

Dr. Dickinson, *6th of January*, 1863.

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7. *Fibrinous coagula of old standing within the cavities of the heart, which had undergone a process of softening, and in some cases had become partially converted into a puriform fluid.*

The following series of cases was adduced not merely as illustrating the fact of the spontaneous formation of fibrinous coagula within the heart, but as showing how completely such coagula may become altered

in character, and possibly prove a source of much mischief in consequence of such alteration. It was assumed from the nature of the coagula, viz., their colour, form, the character of their surface, their adherence to the inner surface of the heart's cavities, and the changes which they had obviously undergone, that they were of old standing, *i.e.*, had been originally formed at a longer or shorter period before death. What length of time it had required for the accomplishment of the softening processes, the breaking down into grumous puriform fluid in those cases which exhibited this alteration, it seemed impossible to state. Also what symptoms could be asserted as being connected with the establishment or presence of their coagula, it was impossible to define, seeing that out of the eight cases brought forward the coagulum was situated in the right auricle in five, in a part quite remote from the valves; in the right ventricle in two, at a point also far from the valvular apparatus, *i.e.*, between and around the 'columnæ carneæ;' and in one case in the left ventricle also not interfering with the valves. Any symptoms, such as those of obstruction (anasarca, apnœa, lividity, &c.), which their presence might have led to, provided that the mechanism of the heart's valves was unimpeded, could perhaps hardly in these cases be recognised, and certainly could not be in any way appreciated as distinctive of such coagulum. And, of course, even when valvular bruits might be occasioned, it would be a matter of great difficulty to assign such with any positiveness to old-standing coagulum.

The cases, abridged, and given only in such detail as appeared necessary, were as follows:—

Case I.—*Fibrinous coagulum of old standing in the right auricle, softened and broken down, in its interior, into a puriform fluid.*—The coagulum was very firm and solid, and very strongly adherent to the inner surface of the auricle. The softened portion was very decidedly limited in outline, so as to form a cavity in which the puriform fluid was contained, with tolerably dense parietes (*See* Plate II., Fig. 1). All the cavities of the heart were very large and the walls of the left ventricle were thickened; in addition to the old-standing clot above-mentioned in the right auricle, the right ventricle, as well as the left ventricle, contained slight collections of coagulated fibrine, undergoing softening and other changes. The valves and orifices of the heart were natural, and the left ventricle was almost quite contracted. Both the lungs contained quantities of extravasated blood in their lower parts; and both showed that their substance had been much compressed by fluid, which, along

DESCRIPTION OF PLATE II.

To illustrate Dr. J. W. Ogle's Paper on Fibrinous Coagula of old standing, within the Cavities of the Heart, p. 66.

Fig. 1. Represents a fibrinous coagulum of old standing in the right auricle, softened and broken-down in its interior into a puriform fluid.

Fig. 2. Represents a fibrinous clot in the right auricle, adherent, and containing a cavity which had been filled with grumous fluid.

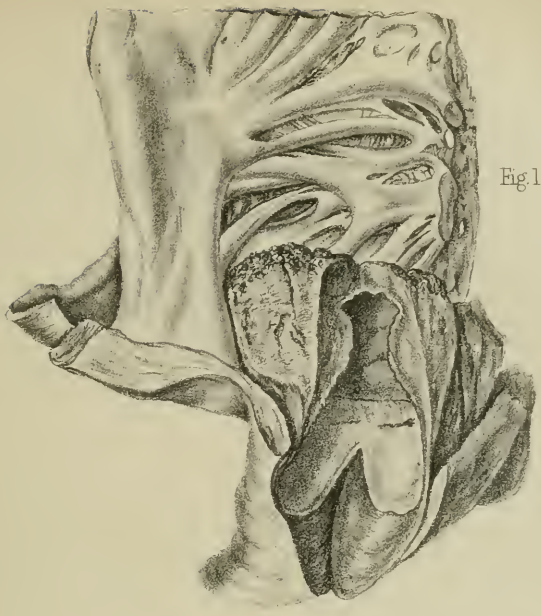

Fig. 1.

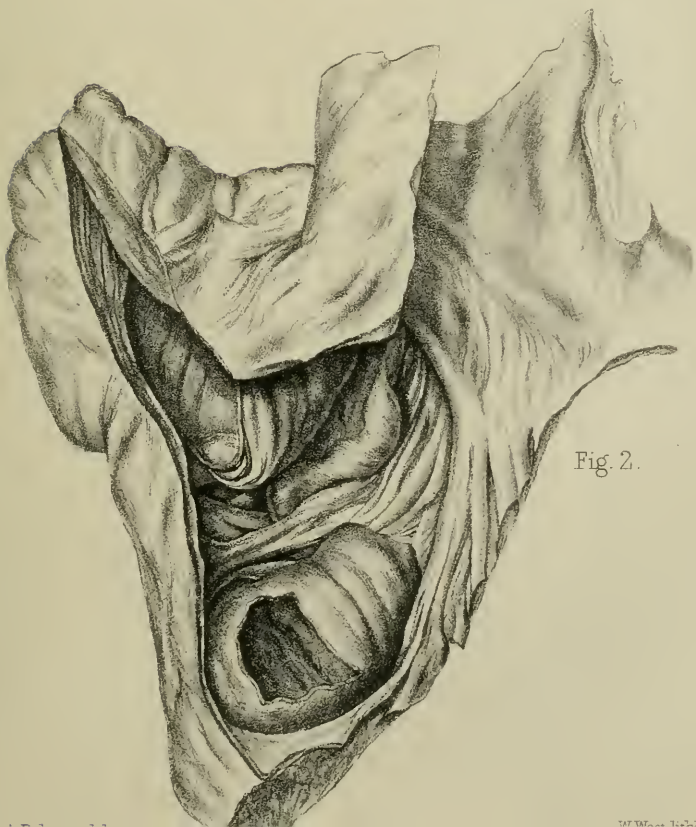

Fig. 2.

with a certain amount of recent fibrinous exudation, existed in the pleural cavities. The kidneys were diseased, being granular and contracted. The spleen, liver, and other organs, were apparently healthy.

The specimen was removed from the body of a woman, S. H., æt. 45, who was admitted into St. George's Hospital, having been ill for nine months with cough, dyspnœa, weak and irregular pulse, and distinct physical signs of pleuritic effusion. Albumen was found in the urine; and much vomiting was complained of. She was the subject of many attacks of intense dyspnœa and gradually sank, and died about fifteen days after admission.*

Case II.—*Fibrinous coagulum in the right auricle, adherent to the wall of the cavity, and (when recent) containing in its centre a quantity of brownish-red grumous fluid, which escaped on section.*—This fibrinous clot was arranged in two masses, each of which was almost completely converted into a species of sac containing the grumous fluid. Of these, one occupying the appendix of the auricle, was very firmly adherent to the walls of the cavity,the other was but slightly adherent there to (*See* Plate II., Fig. 2).

In addition to the above-mentioned state of the right auricle, the heart was very large, and the cavities of the right side were exceedingly dilated, their walls being attenuated and their orifices large. The valves on the right side were healthy. On the left side the cavities were dilated, and the heart's walls thickened. The valves were healthy; but bead-like fibrinous deposits were found on the edges of the mitral valve-flaps. There was a large quantity of brown fluid in the right pleural sac, compressing the lung, which contained a trace of extravasated blood in its centre. The left lung was emphysematous. The liver was congested, the kidneys granular, and diminished in size; and in the spleen was a large block of yellow fibrine, appearing on the surface, and passsing into the interior of the organ. A fibrous tumour in the uterus existed.

The specimen was removed from the body of a woman, M. B., æt. 45, who was admitted into St. George's Hospital, having been an in-patient previously with cough, palpitation of the heart, &c. When admitted a second time, she had much anasarca of the lower limbs, drowsiness, and, at the same time, restlessness, and much "oppression" at the region of the heart. The heart's action was irregular and violent; but no decided murmur could be detected. There was, however, some jugular

* See St. George's Hospital Pathological Catalogue, Series vi. No. 208.

regurgitation. Much albumen existed in the urine. Symptoms of pleurisy came on, general and stethoscopic, and also much lividity of the face, and a slow and laboured state of the heart. She sank and died, in spite of diuretics, salines, and aperients, and the necessary stimulants, which at first gave great relief.*

Case III.—*Fibrinous coagulum, of long standing, within the appendix of the right auricle of the heart.*—This coagulum was of considerable size and very much softened as to its central parts, and much adherent to the walls of the cavity. No other coagulum of any kind existed in the cavities of the heart. There was a slight amount of atheromatous deposit in the coronary arteries, and dilatation of the right ventricle, with thickening of one of the aortic valve-flaps: the heart weighed eight and a-half ounces. The whole arterial system showed much atheromatous alteration. The kidneys presented a cysted and granular condition, and the capsules of the spleen and liver were opaque and thickened. The pleural sacs and the lung substance contained much fluid.

The specimen was removed from the body of M. S., æt. 65, who was admitted into St. George's Hospital, with dyspnœa, ascites, and albuminous urine. After sinking for a length of time, she died, about six weeks after admission.†

Case IV.—*Fibrinous coagulum of old standing within the cavity of the right auricle, quite broken down and diffluent in its centre.*—The coagulum consisted of two masses, within the right auricle, one of which occupied the appendix of that cavity. In addition to this softened coagulum within the auricle, similarly softened and old-standing clot was also found in the right ventricle. The heart was itself unusually large, and its muscular structure was flabby. The valves and orifices were natural. There was a little atheroma of the ascending aorta. The liver and spleen were congested, and the kidneys were unusually large, smooth, and mottled; and on section, presented a deposit of a greyish-white colour in their cortical parts.

This specimen was removed from the body of a man, T. R., æt. 41, who was admitted into St. George's Hospital, having been ill six months previously, with pain in the limbs and dropsy. From these symptoms, he said, he recovered; but they had returned three weeks before admission. There was also much pain in the head, and much vomiting, and

* See St. George's Hospital Pathological Catalogue, Series vi. No. 207.
† See St. George's Hospital Pathological Catalogue, Series vi. No. 42.

the urine contained pus and blood and renal casts. He died on the 16th of June.*

Case V.—*Large fibrinous coagulum of old standing, containing in its centre a quantity of broken-down puriform fluid, and occupying the right auricle of the heart.*—The mass of coagulum before-mentioned was quite firmly adherent to the parietes of the auricle, and was exceedingly solid and compact in texture. All the cavities of the heart were dilated, but especially those of the right side, and the right auriculo-ventricular orifice was very unusually large. There was much emphysema of the lungs, with a vascular condition of the bronchial tubes; and in the upper part of the right lung was a large patch of tissue in a leathery condition, as if from previous consolidation. There was a large amount of pleural adhesion, and much reddish fluid in the pleural sacs. The kidneys were very vascular and heavy; their capsules adherent. The liver was large and "nutmeggy." Other organs natural.

The specimen was removed from the body of a man, S. Y. K., a gas-fitter, æt. 45, who was admitted into St. George's Hospital. He was a resident of a very low part of Westminster, near the river, and was an intemperate man. He stated, that having been in good health until six weeks ago, he then "caught cold," and had "tightness of breath," which was followed by anasarca of the lower limbs. On admission, his face was blue, being congested, and the heart's action feeble, but not irregular. On several occasions a murmur was distinguishable at the apex of the heart; and the position in which he lay appeared to diminish or remove the murmur; but at other times no cardiac bruit could be found. The urine was scanty, very albuminous, and had a specific gravity of 1018. Subsequently, the albumen decreased; but casts of renal tubes, pus, and blood-corpuscles were met with. He expectorated much muco-purulent fluid, and had many attacks of dyspnœa, the face and hands continuing blue. He died, about one week after admission, having gradually sunk from exhaustion.†

Case VI.—*Fibrinous coagulum within the right ventricle of the heart, softened in its centre, and broken down into a puriform fluid.*—The above-mentioned coagulum formed a large-sized mass which was intimately adherent to the inner surface of the ventricle, and entwined about the columnæ carneæ. White fibrinous coagula existed in both

* See St. George's Hospital Pathological Catalogue, Series vi. No. 209.

† See St. George's Hospital Pathological Catalogue, Series vi. No. 206.

ventricles. The heart was large, weighing fifteen ounces. Both lungs were emphysematous, and the bronchial membrane throughout was vascular, the tubes being filled with mucus; pleural adhesions existed on both sides. The liver was "nutmeggy," the spleen congested, kidneys natural.

This specimen was removed from the body of a man, W. S., æt. 19, who had been in St. George's Hospital for bronchitis one year before, and was readmitted, having been ill again with bronchitis and excessive dyspnœa. The heart's sounds were distinct, the face livid, the pulse quick and full; and there was undue dulness over the base of the right lung; auscultatory signs of bronchitis existed. Extreme orthopnœa came on, and increased daily until death occurred, about three weeks after admission.*

Case VII. was one in which small masses of fibrinous coagulum, many of them softening and some quite broken down, existed among the columnæ carneæ of the left ventricle. In this case embolism of the cerebral vessels existed; and for that reason the case is given with a certain amount of detail in the series devoted to the "nervous system."

Case VIII.—*Fibrinous masses of old standing and of considerable size, adherent to the inner surface of the left ventricle at its apex.*—In addition to the fibrinous mass above-mentioned, no coagulum of a like kind existed in any of the heart's cavities. The patient died of bronchitis with anasarca of the legs.

Microscopical Appearances.—Passing over the appearances presented by two firm fibrinous masses, which were simply those of ordinary coagulum, the softened and broken-down parts differed considerably in their composition. In many cases the half-fluid material showed merely amorphous, molecular, granular, and fatty material without any other admixture; whilst in others there was a greater approach to elementary structure, definite nuclear formations existing. In one or two cases variously-sized cell-like structures were found in abundance; some with and others without nuclei, and also numbers of delicate small fibrils and isolated nuclei, with numbers of so-called "compound granular corpuscles."

Remarks.—Independent of the question (before alluded to) regarding the probable symptoms connected with coagula in the heart's cavities, such as those described above, it cannot fail to become a matter of

* See St. George's Hospital Pathological Catalogue, Series vi. No. 210.

inquiry whether the existence of such formations, containing within them (as some did) collections of broken-down, half-fluid, or completely fluid, puriform and grumous material, is not fraught with danger, *apart from the mechanical impediments which they may offer*. The question arises in one's mind, What would be the probable effects of a yielding or rupture of these coagula during life (a circumstance which, seeing that the portion of coagulum remaining solid was so thin and slight, was easily conceivable), and the consequent escape of the enclosed fluid and admixture thereof with the current of the blood? Could such admixture exist without a "resentment" on the part of the system? Might it not be thought likely that this grumous puriform fluid, if it became in any large quantity poured into the circulation, would excite symptoms akin to those termed pyæmic? May it not frequently have happened before now that anomalous symptoms of the kind may have been due to an escape from the middle of coagula of the puriform fluid? Would not experiment in this direction render the question capable of solution?

Dr. John Ogle, *20th of January*, 1863.

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8. *Further report on softening clots in the heart.*

In the latter end of the year 1855, I communicated to the Pathological Society a report on what I termed "softening clots in the heart." My report was founded on twenty-three cases of the affection which had come under my notice, and had been recorded by me during five or six years' pathological experience at St. Thomas's Hospital. From the date of that report up to the end of September, 1860, I continued to perform the duties of demonstrator of morbid anatomy; and during this time met with forty-two similar cases. The particulars of one of these were given in a note appended to my former report; forty-one cases, therefore remain; and of these I propose now to give an analysis.

(1.) *Sex.*—Twenty-eight of the cases were cases of males; thirteen of females.

(2.) *Age.*—One case occurred between 10 and 15; three between 15 and 20; four between 20 and 30; ten between 30 and 40; nine between 40 and 50; nine between 50 and 60; three between 60 and 70; and one between 70 and eighty.

(3.) *Situation.*—The clots were discovered in the left ventricle twenty-seven times; in the right auricle, nineteen times; in the right ventricle, fifteen times; and in the left auricle, six times. The following is a table showing, so far as could be ascertained, the cause of death, and the situation of the clots in each case.

		R.		L.	
		Au.	V.	Au.	V.
1	Disease of arteries; hypertrophy of heart..	—	1	—	1
2	Disease of aorta; hypertrophy of heart	—	—	1	1
3	Hypertrophy of heart; chronic ulcer of stomach; apoplectic cyst in brain	1	1	—	1
4	Disease of aortic & mitral valves	—	—	1	1
5	Branny kidneys	1	1	1	1
6	Hypertrophy of heart	1	—	—	1
7	Hypertrophy and dilatation of heart	1	1	—	1
8	Hypertrophy of heart	—	—	—	1
9	Disease of aortic valves	1	—	—	—
10	Chronic phthisis	1	—	—	—
11	Chronic phthisis	—	1	—	1
12	Aneurism and hypertrophy of heart; adherent pericardium	1	—	—	—
13	Chronic bronchitis; hypertrophy of heart	—	1	—	—
14	Tubercular pericarditis	1	—	—	—
15	Cancer of stomach and liver; vegetations on aortic and mitral valves	—	—	—	1
16	Contracted, granular kidneys; hypertrophy of heart; disease of arteries	1	1	—	—
17	Acute phthisis..	—	—	—	1
18	Chronic phthisis	—	—	—	1
19	Chronic phthisis	—	1	—	—
20	Adherent pericardium; hypertrophy of heart	1	1	—	1
21	Hypertrophy of heart, &c.	—	—	—	1
22	Affection of lungs, heart, and kidneys (chronic)	—	—	—	1
23	Chronic affection of heart and lungs	—	—	—	1
24	Granular kidneys; hypertrophied heart; softening clots in pulmonary arteries	—	—	1	1
25	Hypertrophy of heart; softening clots in pulmonary arteries	—	—	—	1
26	Disease of mitral valve; embolism of cerebral arteries	1	—	—	—
27	Ulceration of throat after scarlet fever ..	1	1	—	1
28	Hypertrophy of heart	1	—	—	1
29	Disease of mitral valve	1	—	—	—
30	Disease of aortic valves; hypertrophy of heart	—	—	—	1
31	Chronic phthisis	—	1	—	—
32	Phthisis; branny kidneys	—	—	—	1
33	Disease of mitral valve; hypertrophy of heart	1	—	1	—
34	Emphysema of lungs; hypertrophy of heart	1	1	1	—
35	Chronic disease of lungs; hypertrophy of heart	1	—	—	—
36	Extreme aortic disease; hypertrophy of heart; granular kidneys	—	—	—	1
37	Phthisis	—	1	—	—
38	Extreme aortic disease; hypertrophy of heart	—	—	—	1
39	Hypertrophy of heart	—	—	—	1
40	Dilated heart ..	1	1	—	1
41	Hypertrophy of heart	1	1	—	1
	Total....	19	15	6	27

DESCRIPTION OF PLATE III.

Illustrates Dr. Bristowe's Paper on Softening Cardiac Clots, p. 73.

Fig. 1. Represents a softening cardiac clot formed round one of the musculi papillares and its chordæ tendineæ.

Fig. 2 represents Dr. Bristowe's Case of Dilatation and Rupture of the Ascending Arch of the Aorta, p. 86.

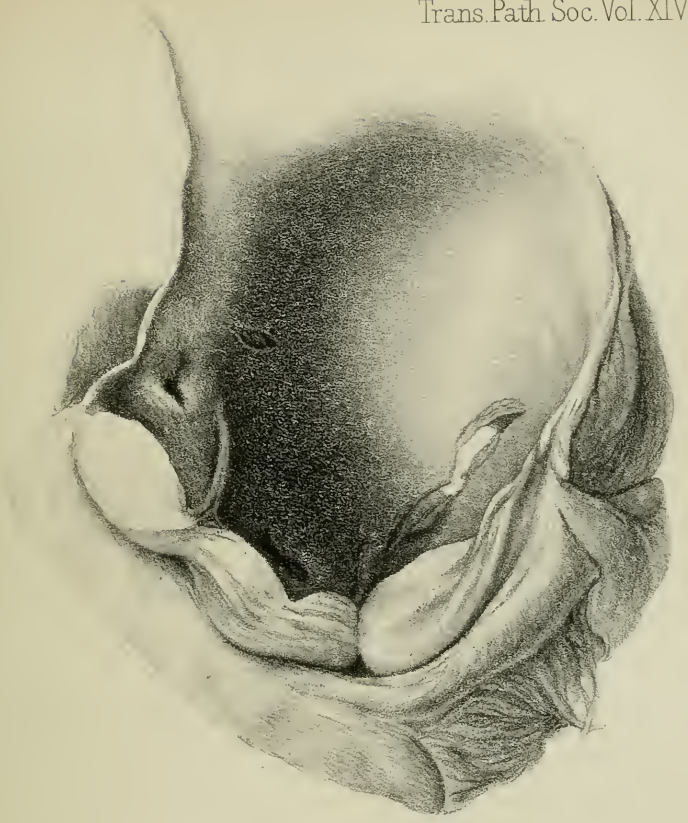

Fig. 2.

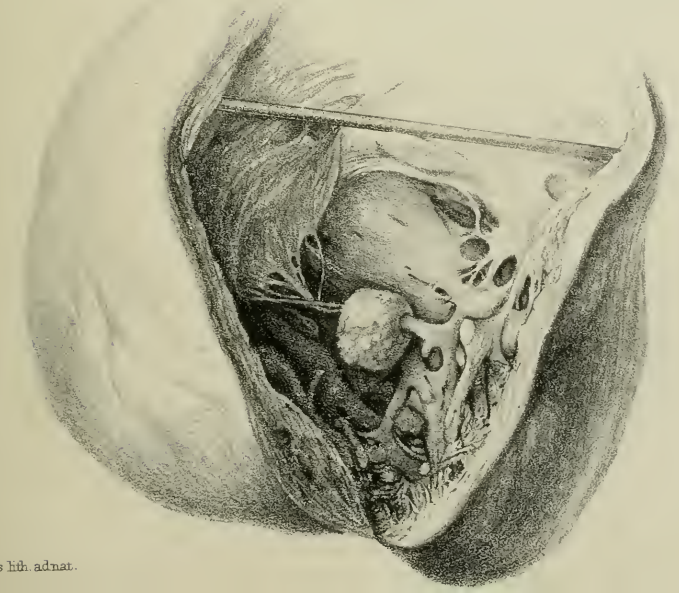

Fig. 1.

E. Burgess lith. adnat.

W. West lithf

They were discovered in almost every instance in those parts of the heart which seem most favourable to the stagnation of blood, viz., the auricular appendages and the apices of the ventricles; to the surfaces of which they were attached by inter-digitation with carneæ columnæ, and other inequalities of surface. In two cases they had formed around chordæ tendineæ and extremities of musculi papillares. (Plate III., Fig. 1.)

(4.) In my former paper I remarked that these clots were found chiefly, if not entirely, in those cases in which the struggle between life and death had been protracted; and pointed out that most of my cases were cases of heart disease, chronic lung disease (including phthisis), and kidney disease, and that their occurrence in pyæmia was quite exceptional. The present series of cases confirms this view. All the cases, but one, were cases of either heart disease, arterial disease, chronic bronchitis, renal disease, tuberculosis, or such a complex of two or more of these affections as we are constantly meeting with in hospital practice The exceptional case was one of sloughing throat after scarlet fever.

(5.) To the description which I gave, and to the views which I expressed as to the mode and cause of formation of these bodies, I have scarcely anything to add. In my former paper, I stated as the result of my examinations, that the puriform fluid, which is generally found in their interior, has such characters alone as might be expected to be furnished by altered and decomposing blood; but I brought forward one case in which the fluid contents presented under the microscope numerous cellular bodies, which were not very unlike pus-cells, and which were far too abundant to be merely unchanged white corpuscles. Among my present cases there is also one in which the microscopic characters of the fluid contents were peculiar. I refer to the case of death after scarlet fever. Here, the contents had all the microscopic appearances of true pus. Whether, however, this fluid should be really regarded as true pus I do not presume to determine; but I think it may be safely affirmed that, whether true pus or not, it had formed in the position in which it was found, and had not been carried thither from a distance. There was no evidence of pyæmia, unless the presence of these clots and their peculiar contents be regarded as such.

(6.) I may add, as bearing on the formation of these bodies, and also on the spontaneous formation of similar bodies in the arteries of the brain and elsewhere, that in some cases of the present series similar softening clots were found in some of the blood-vessels. In one case they were found in the femoral vein, and in three in the pulmonary arteries. Now, on looking at the facts of these cases, it is perfectly clear

that in none of them can the presence of softening clots in the heart be explained by their transference thither from blood-vessels, and that on the other hand their presence in the blood-vessels cannot be fairly accounted for on the supposition that they had been carried from the heart. A reasonable, and I should think the correct, explanation is, therefore, that in these cases the clots had formed in the position in which they were discovered, and that the same cause which operates to produce them in the heart, may equally operate to produce them elsewhere.

(7.) I close my remarks with a brief summary of the conclusions with regard to these cardiac clots at which I have arrived, and which I have on a former occasion expressed at greater length :

a. Sex and age have little or no obvious influence over their production.

b. They occur in all the cavities of the heart, but most frequently in the left ventricle, and least frequently in the left auricle.

c. They affect, with scarcely an exception, those parts of the cavities which are out of the direct line of circulation; and are always fixed by being entangled amongst the inequalities of surface.

d. They are met with, almost exclusively, in those forms of disease in which the process of death is, as a rule, protracted.

e. Their arrangement, their form, their microscopic characters, all seem to show that (excluding one or two unusual cases) they consist merely of blood which has coagulated during life, and has undergone those changes alone which clots elsewhere in the living body are liable to undergo.

f. They are the result of the spontaneous coagulation of blood in the heart's cavities, at a variable period anterior to death, but occurring at a time at which the patient is in a moribund condition, or in a condition of threatening dissolution. Dr. Bristowe, *3rd of February*, 1863.

APPENDIX TO DR. BRISTOWE'S PAPER ON SOFTENING CLOTS IN THE HEART.

No.	Age.	Sex.	Disease.	Description of Clots.	History.
1	52	M	Hypertrophy of heart (twenty ounces); disease of arteries; atrophy of kidneys; anasarca	Softening clots in right and left ventricles.	—
2	58	M	Disease of aorta; hypertrophy and dilatation of heart (twenty-two ounces); slight pericarditis; obsolete tubercles in lungs; kidneys small; indurated	Heart's cavities distended by black-currant-jelly-like coagulum. To the surface of the left ventricle, and of the left auricular appendage, were attached numerous softening coagula from the size of a horse-bean to that of a pin's-head. Two or three contained small cavities	—
3	45	M	Apoplectic cyst in corpus striatum; atheroma and dilatation of cerebral arteries; pulmonary apoplexy, clots softening; hypertrophy of heart (twenty-one ounces and a-half); softening fibrinous masses in spleen; chronic ulcer of stomach; disease of arteries	Softening clots in right and left ventricles, and, in a less degree, in right auricle	—
4	42	M	Adherent pericardium; disease of aortic and mitral valves; hypertrophy of heart (twenty-two ounces); pulmonary apoplexy; anasarca; slight jaundice	All the cavities contained fibrinous coagula. Projecting from the interspaces between the carneæ columnæ of the left ventricle, and from the spaces between the musculi pectenati of the left auricle, were numerous softening clots. The projecting portions were rounded, and varied in size from that of a horse-bean downwards; and they were connected in the usual way beneath the muscular bands. They were buff-coloured and lacerable, and many of them presented irregular cavities, which were filled with thick puriform fluid. They consisted chiefly of molecular matter, oil-globules, and imperfect nuclear bodies	—

No.	Age.	Sex.	Disease.	Description of Clots.	History.
5	34	F	Branny kidneys; pulmonary apoplexy; anasarca	The left ventricle presented several rounded clots, one as large as a horse-bean, another lobulated, and altogether about as large as a marble, and two or three smaller ones. These were solid throughout, and much denser than such clots usually are. They had an opaque buff-colour, and, towards the periphery, were indistinctly laminated. Similar clots, some of which were softened, were discovered in all the other cavities. The coagula presented a large quantity of granular matter, oil, and broken-down cells, together with a fibroid reticulum. The puriform fluid displayed characters almost precisely similar	—
6	46	M	Hypertrophy of heart; pulmonary apoplexy; anasarca	Rounded clots, partially softened, in left ventricle and right auricle	—
7	39	M	Hypertrophy and dilatation of heart (twenty-five ounces and a-half); pulmonary apoplexy; anasarca	Numerous rounded clots, from size of a pigeon's-egg downwards, projecting from the surface of the left ventricle; similar smaller ones in right auricle and ventricle; surface ribbed; colour varying from buff to brick-red; partially softened and broken down internally	—
8	48	F	Hypertrophy of heart (seventeen ounces); patchy thickening of endocardium of left side of heart, involving the aortic and mitral valves, but not apparently affecting their competence; pulmonary apoplexy; anasarca	A few rounded, softening clots in left ventricle	—
9	58	M	Heart twenty-two ounces and a-half; disease of aortic valves and of aorta; pulmonary apoplexy; anasarca	Softening clots in right auricle; cavities full of black-currant-jelly-like coagulum	—
10	53	M	Emphysema of lungs, with remains of cavities and tubercu-	Small, tough, round, adherent coagula in right auricle	—

No.	Age.	Sex.	Disease.	Description of Clots.	History.
			lar deposits; dilated tubes; hypertrophy of right ventricle of heart (thirteen ounces)		
11	31	M	Old tubercle and vomicæ in lungs, with emphysema; slight hypertrophy of right ventricle (twelve ounces)	Commencing concretions in both ventricles	—
12	38	M	Aneurism of heart and hypertrophy (twenty-one ounces); adherent pericardium; pulmonary apoplexy in various stages; anasarca	A few softening clots in right auricular appendage.	Was ill for about nine months with the usual symptoms of heart disease
13	39	F	Chronic bronchitis; hypertrophy of heart (eighteen ounces); old adhesions around liver; ascites; anasarca of lungs	Several softening clots in apex of right ventricle	Usual symptoms of ascites of long-standing, with bronchitis; paracentesis performed; death in three days
14	13	M	Tubercular pericarditis; fibrinous block in spleen; carnification of lungs, with induration of apices; adherent pleuræ; kidneys congested	A cyst the size of a marble in the right auricle, with thin and variegated parietes, and full of brick-red fluid	A strumous, ailing boy, who presented many of the symptoms of phthisis but while under observation, gave no distinct evidence of heart-disease; urine albuminous
15	47	M	Cancer of stomach and liver, with secondary deposits (?) in lung; vegetations on aortic and mitral valves	Connected with two or three of the chordæ tendineæ of the mitral valve were two small cysts (one as large as a pea, the other the size of a tare), which were rounded, had a slightly reticulated surface, a buff colour, and were evidently softening clots. Through the substance of one of them two of the tendinous cords passed, and the other was formed round a single cord	Ill for about eight months with symptoms of cancer of stomach, and of abdominal tumour

No.	Age.	Sex.	Disease.	Description of Clots.	History.
16	61	M	Contracted, granular, mottled kidneys; hypertrophy of heart (twenty-two ounces and a-half); disease of arteries; pleurisy; anasarca	Softening clots in right auricle and ventricle	Albuminuria, and other symptoms of renal disease
17	20	F	Acute phthisis; tubercle in kidneys	Small globular vegetations in left ventricle	Ill altogether about three months with cough and expectoration, and during latter half of time hæmoptysis
18	36	M	Chronic phthisis; tubercle in kidneys; ulceration of intestines	In the left ventricle were numerous softening clots, from the size of a filbert downwards. They were ribbed, buff-coloured, and full of yellow pus-like fluid	Symptoms of phthisis
19	33	M	Chronic phthisis; ulceration of larynx, ileum, and colon	Around the apex of one of the musculi papillares of the right ventricle, and the commencement of the chordæ tendineæ springing from it (Plate III., Fig. 1) was a rounded, buff-coloured coagulum, about as large as a hazel-nut; it formed a ring through which the structures just named passed; was soft and fluctuating	Symptoms of old-standing phthisis
20	49	M	Hypertrophy of heart (sixteen ounces and a-half); adherent pericardium; œdema, congestion, and apoplexy of lungs; fibrinous deposits in spleen and kidneys; anasarca	Several rounded, softening clots in right ventricle and auricle, and in left ventricle	Symptoms for twelve months of subacute capillary bronchitis
21	56	M	Heart dilated (sixteen-ounces); valves apparently competent; lungs œdematous, congested, carnified; liver nutmeg; kidneys	Left ventricle full of dark, soft coagulum; closely connected with the parietes in the neighbourhood of the apex was a considerable quantity of older coagulum, which was ribbed on the surface, and presented alternate streaks of red and buff-coloured material, but was not yet softened internally. Right ventricle full of soft clot.	An intemperate man; ill two years, but worse for three months; suffering on admission from cough, dyspnœa, severe pain

No.	Age.	Sex.	Disease.	Description of Clots.	History.
			cystic, but otherwise apparently healthy		across the chest, anasarca, and slight albuminuria; rhonchus audible everywhere over chest, except low down, where respiration was deficient. Died two months after admission
22	43	F	Heart rather large and dilated; walls thin; valves healthy; lungs carnified; liver fatty; gall-bladder congested; colon excoriated; kidneys slightly granular; anasarca; slight jaundice	Left ventricle presented numerous buff-coloured softening clots, from the size of a hazel-nut downwards. They were all connected with the spaces between the carneæ columnæ, and the largest were at the apex, and contained brick-red puriform fluid	Suffered from cough and palpitation for a long while, for last three months from dropsy; while in the Hospital (fourteen days) complained chiefly of abdominal pain and tenderness, and vomiting
23	58	F	Heart fifteen ounces and three-quarters; right side chiefly hypertrophied; valves competent; collapse, with slight emphysema of lungs; some cysts in kidneys; anasarca	All cavities filled with dark-coloured coagulum. The left ventricle contained in addition two or three adherent coagula, from the size of a hazel-nut downwards. These were decolorized, ribbed on the surface, contained irregular cavities filled with thick puriform fluid, and were entangled among the carneæ columnæ near the apex of the organ	Palpitation twenty years; anasarca six months; symptoms like those of old heart disease, but no murmur; sloughing ulcers on legs, following punctures. In Hospital one month
24	50	F	Heart fifteen ounces; pulmonary apoplexy; the arteries, especially those of the right lung, were extensively plugged with clots, partly decolorized and adherent, partly recent. In one of the larger branches, imbedded in more recent clot, was a buff-coloured, roundish mass as large as a horse-bean, which on section was found to be a softening clot, precisely similar to those in the heart. The pulmonary	The right auricle and ventricle contained a considerable quantity of soft, dark-coloured coagulum; and a good deal of similar clot was present in the left cavities, but these contained additionally softening fibrinous clots. Those in the left ventricle varied from the size of a chestnut to that of a pea; they were situated in the apex and upon the sides of the cavity, and were attached to the parietes, and connected with one another by prolongations between and beneath the carneæ columnæ. They were rounded, buff-coloured, and mottled with red on the surface, and on section were found to be hollowed out into irregular cavities, full of brick-red puriform fluid. Their parietes varied in thickness, and their internal surface was generally irregular and flocculent. Some of the smaller ones were solid throughout.	She came into the Hospital, having been ill for about four months with anasarca, dyspnœa, cough, and other symptoms referrible chiefly to the thoracic organs. There was no distinct evidence of heart-disease. She died between two and three weeks after admission.

No.	Age.	Sex.	Disease.	Description of Clots.	History.
			veins were healthy, and contained only thin cylinders of recent coagulum. Kidneys small, together weighing six ounces and a-half; granular; slight anasarca	In the auricle was an elastic, toughish, fibrinous coagulum, which filled the appendage (to the surface of which it was attached), and extended thence into the general cavity of the auricle, where it became enveloped in soft black-currant-jelly-like clot. On removing the latter from its surface, the fibrinous clot presented an irregular quadrilateral form, and looked as though it had been moulded in the cavity of the auricle, and had contracted considerably subsequently to its formation. Prolonged from it were three or four fibrinous cylinders, about as thick as crow-quills, which were an inch or two long, and lay wholly in the auricle, invested in and concealed by the recent clot. It was clear that these must have been moulded in the pulmonary veins, and that with the shrinking of the auricular clot they had become drawn into the cavity of the auricle. The greater part of the continuous system of fibrinous clots here described was uniform in texture, toughish, elastic, and of a pale buff-colour; but that portion of it contained within the auricular appendage was hollowed out into a cavity as large as a Spanish nut, and was filled with thick, reddish, pus-like fluid. Under the microscope the pus-like fluid in the cardiac clots was found to consist of altered blood containing large numbers of red and white corpuscles, together with minute needle-like crystals	
25	54	F	Heart eighteen ounces and a-half; walls flabby; some of the tendinous cords of the mitral valve were thickened and shortened. Pulmonary apoplexy; many of the branches of the pulmonary artery were filled with coagula, some of which were old and adherent, others of which were recent. In one or two situations they were distinctly buff-coloured, and con-	Entangled amongst the carneæ columnæ of the left ventricle were numerous softening clots, from the size of a filbert downwards. They were rounded, ribbed on the surface, and presented generally a buff-colour. The interior was irregularly hollowed out, and the resulting cavities were filled with brick-red puriform fluid.	She said, on admission, that she had been ill for about four months with cough, dyspnœa, and pain between the shoulders; six weeks before admission hæmoptysis came on for the first time, and her other symptoms increased in severity. On coming in she was suffering from orthopnœa, lividity of face, cough, and other bronchitic symptoms, but the heart-sounds appeared

No.	Age.	Sex.	Disease.	Description of Clots.	History.
			tained cavities in their interior, filled with brick-red puriform fluid; kidneys healthy; much anasarca		to be healthy. Soon anasarca came on, and, after she had been in the Hospital six weeks or two months, a systolic murmur at the apex was first detected. She died about three months after admission
26	53	F	Disease of mitral valve, with deposit of lymph; clots in cerebral artery, and circumscribed softening of brain; limited empyema	Small softening clots in right auricular appendage	Case given in vol. x. "Path. Trans.," p. 51
27	18	F	Sloughy ulceration of tonsils; contents of larger veins and arteries healthy; no evidences of pyæmia	Fibrinous clots in right auricle and ventricle, and in left auricle, containing soft matter, which, microscopically and otherwise, had all the characters of pus	Sequelæ of scarlet fever
28	54	M	Hypertrophy of heart (fifteen ounces and a-half); pulmonary apoplexy, some of the clots softening; anasarca; erysipelas; no evidences of pyæmia	Softening clots in left ventricle, and a few in the right auricular appendage	—
29	18	F	Heart eleven ounces; disease of mitral valve; pulmonary apoplexy; pleurisy; extreme anasarca	The heart's cavities, especially the right, contained large, partly decolorized coagula; and in the right auricular appendage were several small softening clots	Confined shortly before admission; had never had rheumatism, but had had palpitation seven months; anasarca and cough for four or five months; hæmoptysis latterly; orthopnœa on admission, with signs of bronchitis and effusion into pleuræ; no cardiac murmur

No.	Age.	Sex.	Disease.	Description of Clots.	History.
					audible; urine not albuminous; died a fortnight after admission
30	41	M	Hypertrophy of heart (twenty ounces and a-half); incompetence of aortic valves; anasarca	Adherent, ribbed, buff-coloured coagula in apex of left ventricle	Ill with symptoms of heart disease for three months
31	55	M	Chronic changes in lung connected with tubercle	Numerous small, rounded, ribbed, buff-coloured coagula in right ventricle, not yet softened	Symptoms of chronic phthisis
32	26	F	Phthisis; ulcers in bowels; branny kidneys	Two or three ribbed, softening clots in left ventricle	Ill ten months with symptoms of phthisis
33	31	M	Hypertrophy of heart (nineteen ounces and a-half); contraction of mitral valve; cirrhosis of liver; anasarca	The left auricular appendage was occupied by an adherent softening clot; and a similar, but smaller one, was found in the right auricular appendage	—
34	74	M	Hypertrophy of heart (sixteen ounces and a-half); valves apparently healthy; pulmonary apoplexy; emphysema; cystic kidneys; anasarca	Many softening ribbed clots occupied the right auricular appendago, and projected from the interspaces between the musculi pectenati. They varied from the size of a small hazel-nut downwards, and were full of grumous fluid. A few occupied the left auricular appendago; and two or three were found in the apex of the right ventricle	—
35	42	M	Hypertrophy of heart (fifteen ounces); valves healthy; chronic disease of lungs; anasarca; effusion into pleura; old disease of liver; slight affection of kidneys	A few rounded adherent clots in right auricular appendage	—
36	66	M	Hypertrophy of heart; extreme disease of the aorta; kidneys granular; anasarca	In apex of left ventricle several large, ribbed, softened clots, containing brick-red fluid	Stated that he had been ill for several weeks only. The urine was albuminous. The symptoms were in no way remarkable

No.	Age.	Sex.	Disease.	Description of Clots.	History.
37	23	M	Phthisis; ulceration of colon and larynx	Attached to the parietes of the right ventricle were numerous rounded clots, from the size of a horse-bean downwards, filled with puriform fluid	Ill with phthisical symptoms for five or six months
38	30	M	Hypertrophy of right side of heart; pulmonary apoplexy; numerous coagula in pulmonary arteries, of which some were decolorized, and some had become decomposed into thick grumous fluid; extensive disease of aorta, with two aneurisms; anasarca	Many small softening clots attached to the walls of left ventricle	Orthopnœa; hæmoptysis; albuminous urine, and general symptoms of extensive heart disease, which had been coming on for some time
39	27	M	Heart hypertrophied; pulmonary apoplexy; anasarca; purpura	An irregular clot, as large as a bantam's egg, in apex of left ventricle; slightly adherent, and entangled among the carneæ columnæ; ribbed on surface, and broken up irregularly within into cavities containing thick grumous fluid; a few similar but smaller clots in other parts of same cavity	General symptoms of extreme heart disease (without murmur); no albuminuria
40	17	F	Heart dilated; valves apparently healthy; pulmonary apoplexy; anasarca; congestion of left thigh; the left femoral vein and its branches were full of dark-coloured coagula, and the former (immediately below Poupart's ligament) presented a small, decolorized, adherent clot	Adhering to parietes of lower half of left ventricle, and in right auricular appendage, were several largish clots, rounded and ribbed externally, and softened within into a grumous fluid; a few smaller ones were found in the right ventricle	Cough for some months, attended latterly by hæmoptysis and anasarca
41	61	M	Hypertrophy and dilatation of heart (seventeen ounces and a-half); pulmonary apoplexy; clots becoming decolorized; anasarca; slight jaundice	A few softening clots, from size of a horse-bean downwards, attached to parietes of both ventricles and of right auricle	Had complained of cough, dyspnœa, slight hæmoptysis, and other symptoms of heart disease for about eight months

9. *Wound of the popliteal artery and vein; diffused traumatic aneurism; ligature of the wounded artery at the seat of injury; amputation; death.*

J. M., æt. 16, was accidentally wounded in the left thigh with a knife, which entered the limb from before, at the junction of its middle and lower third. Copious hæmorrhage followed, but was readily controlled by a bystander, until the arrival of Mr. Leach, Borough, by whom a compress and bandage were applied, and bleeding did not recur. The limb below the wound began to swell, and after forty-eight hours, the bandage was removed. On the seventh day, Mr. Maunder saw the case with Mr. Leach, when the limb had become very œdematous, and a pulsating tumour, the area of which was extensive, and was on the increase, existed. A wound, about half-an-inch in length, through which a portion of cellular tissue projected, occupied the centre of the swelling, and a little external to the above was a small vesication, caused probably by the bandage. The dorsalis pedis artery pulsated, and pressure upon the femoral in the groin checked the pulse, both in the above vessel and in the tumour. The posterior tibial artery could not be recognized. The patient was at once removed to the London Hospital, where, after a consultation with his colleague Mr. Hutchinson, and with Mr. Leach, Mr. Maunder enlarged the wound in the thigh upwards and downwards, with a view to find the wounded vessel, and to ligature it above and below the wound. The aneurismal tumour being laid open, its contents (fluid blood), gushed forth; and the forefinger of the left hand, quickly inserted, followed the original track of the knife and entered a wounded vessel, the tip of the finger being then bathed in warmer blood. With great difficulty, by reason of the depth of the wound, and constant oozing of dark blood whenever the finger was moved in the least degree, a ligature was applied to the artery above and below the wound in it. The finger was now removed, when, quite unexpectedly, dark blood gushed up as before; and in the belief that the main vein also was wounded, amputation was at once performed at the seat of injury. The popliteal artery and vein proved to be both wounded; the former to the extent of one-half its circumference, the latter was transfixed and nearly severed.

The boy died exhausted on the sixth day.

Mr. Maunder, *3rd of February*, 1863.

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10. *Rupture of the aorta with effusion of blood into the pericardium.*

A woman of middle condition of life, æt. 65, who had been, for some

time previously, the subject of more than slight paralysis, fell from the step of an omnibus, and was left awhile on the ground without assistance, under the impression of by-standers that she was intoxicated. This was on the Friday, three days previous to her decease.

When she had returned home, she complained repeatedly of suffering from her fall, and declared that she should never recover from the results of it; but on the Sunday evening she regained her spirits to some extent; ate supper, and went upstairs with a degree of liveliness. She was found dead in bed, the next morning; the body still warm, according to account, but certainly cold when seen by the medical attendant at a somewhat later hour.

The *post-mortem examination* was performed forty-eight hours after death.

On removal of the front of the chest, the pericardium was displayed as a large, dark-coloured flattened projection, extending horizontally below the margin of the superior lobe of the lung, which was very much tilted up to make room for it. The appearance of a dark jelly-like effusion was remarked in the reflexion of the serous sac around the commencement of the great vessels, and the same appearance was continued upon the roots of the lungs.

The pericardium was completely filled with very dark-coloured blood, both fluid and in loose clots.

On opening the ascending aorta, the vessel was found to be the seat of extensive and rapidly advancing atheroma. There were many elevations of the size of a shilling, and others of a smaller size, of a leathery consistence, with no noticeable earthy deposit; several parts in patches were subject to a thinning process, and appeared to be on the point of giving way.

Just above the aortic valves was a small vertical rent, with non-everted ragged edges, about a third of an inch in size. Through this, the blood had escaped into the pericardium, and had become effused, as described, under the cellular coat of the great vessels.

In the neighbourhood of the tear in the aorta, there appeared a certain degree of separation of the middle coat.

One of the aortic valves was affected by irregular, atheromatous thickening. The other valves of the heart were healthy, as were also the other viscera of the chest, and of the abdomen, with the exception of one ovary which was the subject of cystic disease.

Mr. Gaskoin, *17th of February*, 1863.

11.—*Rupture of the ascending arch of the aorta.*

A young man, a carpenter, æt. 27, and married only six or seven weeks, having previously enjoyed good health (at least not having at any time suffered from serious illness), was seized, on the afternoon of the 31st of January, 1863, while in the act of lifting a ladder, with sudden faintness and pain in the chest. He lay down, and among other symptoms of faintness, lost temporarily the use of his sight. He soon recovered to a great extent, and went (or was taken) home. Dr. Sharpe, of Bermondsey, was sent for, and found him complaining of pain in the back only, which (finding him otherwise apparently well), he looked upon as being due to a sprain of the muscles of the back, or as lumbago, and he treated him accordingly. During the next day or two he continued in much the same condition. But about one o'clock in the morning of the 4th of February, he was seized quite suddenly with severe pain in the chest and between the shoulders, and with great anxiety and difficulty of breathing—so much so, that as long as he retained the physical power, he was compelled to keep his trunk as nearly as possible in the erect position. He died at half-past five A.M., remaining conscious almost to the last.

Post-mortem examination.—Well-nourished, but pale. Head not opened. Abdominal viscera healthy.

Pleuræ and lungs healthy. The pericardium occupied a larger proportion of the anterior surface of the chest than usual. On opening it, it was found to be distended with blood, partly serum and partly a coloured coagulum, which covered and concealed the whole of the heart. On removing this, the heart was found rather larger than natural, but quite contracted. On opening the organ it was seen to be empty. The muscular tissue was natural, and all the valves, except the aortic, were normal. The aortic orifice was manifestly dilated; and the valves (which did not seem incompetent) were stretched and enlarged in all their dimensions. The increase in size was most marked in the case of the valve which abutted on the mitral. This, too, was a little inverted. Between the attachment of the valves and the origin of the innominate artery, the aorta was much dilated, especially posteriorly, and above the most dilated of the aortic valves. The walls of the vessel in this situation seemed thinner than natural, but their substance appeared to be perfectly healthy. The dilated portion of the aorta presented two slits (Plate III., Fig. 2). One an oblique one, about an inch and a-quarter long, was situated immediately above the posterior aortic flap. The other,

about a quarter of an inch long, was more anterior than this, and about half-an-inch above the angles of the valves. Both of them were obviously recent lacerations, were found to extend through the inner and middle coats, and to open into a cavity situated between the condensed cellular tissue, surrounding the aorta in this situation, and the proper arterial walls. The cavity, which was full of coagulum, extended from the root of the aorta below to the origin of the innominate above, forwards as far as the edge of the pulmonary artery, and backwards so as to surround about half of the aorta. Here and there the outer covering of the cavity was much attenuated, and it was easy to see that through fenestrated openings in it blood had oozed into the pericardial cavity.

It would seem that the dilatation of the aorta in this case must have been of long standing, and possibly may have been congenital. The lacerations in it were evidently accidental, and due to the effort to which he himself had referred the commencement of his illness. The act of rupture was attended by pain and faintness; but by little else, inasmuch as the effusion of blood was temporarily limited by the cellular coat of the aorta. This coat, however, after a while gave way, and the patient then died almost suddenly, as persons usually do of rupture of the heart or aorta into the pericardium.

The case is almost identical, in many of its features, with one recorded a few years ago by Dr. Barker in the Medico-Chirurgical Transactions; with the exception that in the latter there seemed to be an obvious explanation of the aortic dilatation, in the fact that a congenital obliteration of the aorta existed at the distal end of its descending arch.

Dr. Bristowe, *17th of February*, 1863.

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12. *Report on cases of dissecting aneurism.*

The specimens presented by Dr. Bristowe and Mr. Gaskoin are examples of what has been described as "Dissecting Aneurisms" in the early stage.

It has generally been supposed that Lænnec was the first writer who applied the term "*dissecting*" to this form of aneurism, but it has been recently shown by M. Broca that M. Maunoir employed the same designation, and clearly described the formation of aneurisms of this kind in his work published in 1802. A characteristic case is also related from the notes of Mr. John Burns, by Mr. Allan Burns, in his work on "Diseases of the Heart and Aneurism," which appeared in 1809. Till recently, however, but few cases of dissecting aneurism

have been placed on record, and it is only of late years that the nature of the affection has been clearly understood.

In 1837, Rokitansky* published several cases, and in 1843† without any knowledge of the previous memoir of Rokitansky, I collected nineteen cases in a paper on the subject. Some few others might have been added from more extended research in the periodicals of this country. In 1847‡ Dr. Crisp referred to twenty-one cases, and in 1849§ I brought together, in a second memoir, references to thirty-eight.

Since that period the number of published cases has been greatly extended, and I have recently been able without difficulty to collect eighty instances in which the affection existed in well-marked forms. Of this number, eight, including the two reported upon, are contained in our own "Transactions," three are published in the Transactions of the Medico-Chirurgical Society, five in the Dublin Journal, six in the Bulletin of the Societé Anatomique of Paris, two in the Memoires of the Societé de Biologie, and not less than twenty-one—of which, however, some appeared in the previous memoir—have been published by Rokitansky in his recent work on the more important diseases of arteries.‖ That work also contains several other observations bearing upon the pathology of the Dissecting Aneurisms. The remaining cases are scattered through the periodicals of this country, the United States, France, Germany, and Italy. An able summary of the existing information on the subject will also be found in a report by M. Leudet,¶ in the Bulletin of the Societé Anatomique of Paris.

This form of aneurism may be described as presenting three stages:

1. *The incipient stage*, in which there is a rupture, or destruction in some other way, of a part or the whole of the internal coats of the vessel, and an extravasation of blood to a limited extent between the external and middle coat, or, more probably, in the laminæ of the latter. Of this stage I am only able to refer to the examples quoted in my former papers.**

2. In the next, or *early stage of the fully-formed dissecting aneurism*, in addition to the internal rupture or perforation, the blood is found to be extensively extravasated in the coats of the vessel, sepa-

* Oesterr. Med. Jahrb., quoted in Schmidt's Jahrbücher, 1839, p. 30.

† Ed. Med. and Surg. Journal, vol. lx. p. 276.

‡ Structure, Diseases, &c., of the Blood-vessels.

§ London and Edinburgh Monthly Journal of Medical Science, vol. ix. (N. S. vol. iii.) p. 1052. ‖ Wien, 1852. ¶ 28me année, 1853, p. 276.

** Morgagni, De Sed. et Causis Morb. xxvii. 28. Nicholl, Phil. Trans. 1762. Hodgson, Diseases of Arteries and Veins, p. 63.

rating the middle from the external tunic, or the laminæ of the middle coat, to a variable extent above the seat of rupture and downwards in the course of the vessel, and not unfrequently along the primary branches. Usually, also, the external boundary of the sac is found to have been torn through, so that the blood has escaped into some of the adjacent cavities.

Of this form of the disease by far the largest number of recorded cases afford examples—seventy-three out of the eighty instances of the fully-formed affection being of this description.

3. In the *advanced stage of dissecting aneurism*, there is found an opening through the internal coats of the vessel, leading into a sac situated within the arterial tunics, and extending to a greater or less distance along the course of the vessel. This sac is lined by a distinct membrane very similar to the natural lining membrane of the arteries. Not unfrequently, also, communications exist between the newly-formed canal and the original vessel, and the former re-opens into the latter or into one or more of its primary branches at the distal extremity. In some cases this condition bears a close resemblance to an abnormal formation of the vessel, and it is highly probable that in one instance a dissecting aneurism of the aorta has been mistaken for a malformation of that vessel.

Of this form of the disease but very few cases are on record, indeed, they amount to only seven or eight; one of the most remarkable being that related by Dr. Swaine in our own "Transactions."*

Influence of sex and age on the production of dissecting aneurisms.—It is well known that the common forms of aneurism are of more frequent occurrence in men than in women, and if the aneurisms of the superficial arteries, to which, for obvious reasons, men are much the most subject, be excluded from the comparison, men are still found to be more frequently affected than women. From the small number of cases on record at the time of the publication of my first paper, I inferred that dissecting aneurisms followed a very opposite rule, being more frequent in women than in men. The larger series which I have now brought together does not altogether confirm that inference: of seventy-two cases in which the sex is named, thirty-nine having occurred

* Shekelton, two cases. Dub. Hosp. Rep. vol. iii. p. 231. Pennock, Am. Journ. of Med. Science, vol. xxiii 1839, p. 13. Henderson, Lond. and Edin. Monthly Journ. of Med. Science, vol. iii. 1843, p. 613. Bouillaud, Arch. Gén. de Med., 4me serie, T. xv. 1847, p. 248. Goupil, Bullet. de la Soc. Anat. 28me année, 1853, p. 276. Cadet-Gassicourt, *Ibid.*, 30me année, 1855, p. 352. Swaine, Path. Trans. vol. vii. 1855-56, p. 106.

in males, and thirty-three in females. This proportion is, however, still greater in women than obtains with the ordinary forms of aneurism.

The dissecting aneurism was also supposed to differ from the common aneurismal affections, in being especially common in persons of advanced age. The present series of cases show that the disease may occur in persons at all periods after early life, but that, allowance being made from the relatively small number of persons living at the more advanced ages, it is more common in old people.

Of sixty-eight persons I find the ages to be as follows:—

17 years of age	1
21 to 24 inclusive . . .	5
From 30 to 40	6
„ 40 to 50	11
„ 50 to 60	18
„ 60 to 70	10
„ 70 to 80	10
84 1	
88 1	3
95 1	

Of four other cases in which the precise age of the subject is not stated, one is reported to have been young, one middle-aged, one elderly, and one aged.

Situation of the perforation of the internal coats and extent of separation of the tunics.—Hitherto the dissecting aneurism has been found only in the aorta or its large branches. From the thinness of the coats of the pulmonary arteries, I should doubt whether they admit of partial laceration and of separation so as to constitute a dissecting aneurism.

Of seventy-three, out of the eighty cases collected, including only those in which the disease was fully formed or of the second and third stages, the internal rupture was situated near the origin of the aorta or in the ascending portion of that vessel, in . . 55 cases.

Of these, the separation extended—

Over a limited portion of the coats, in . . .	18
Over a large portion of the ascending aorta, in .	17
It involved the whole of the ascending aorta, and reached to the origins of the left carotid and subclavian arteries, in	7
It extended from the origin of the aorta over a larger or smaller portion of the descending thoracic aorta, in	6
It reached to some part of the abdominal aorta, in .	3
„ to the bifurcation of the aorta, in . .	2

It reached to the iliac arteries, in 2

The internal rupture was situated at or near the origin of the arteria innominata, in . . . . . 7 cases.

And of these the separation extended—

Upwards to the origin of the aorta, and downwards to beyond the origin of the left subclavian artery, in . 1

It occupied a limited space near the seat of the internal laceration, in 3

It passed along the course of vessel below the tear to the extent of four inches, in 1

It reached to the bifurcation of the aorta, in . . 1

It extended as far as the popliteals, in . . . 1

The internal rupture was situated at the commencement of the descending thoracic aorta and beyond the origin of the left subclavian artery, in . . . . . 8 cases.

In these, the separation extended—

Upwards to the origin of the aorta, and downwards throughout the thoracic portion of the aorta, in . 1

Upwards to the origin of the aorta, and downwards below the rent, in 1

Upwards to the origin of the aorta, in . . . 1

Upwards to the arch, and downwards to the iliacs, in 1

Throughout the descending thoracic aorta, in . . 1

To the renal arteries, in 1

To the iliacs, in 2

The internal ruptures were situated in the abdominal aorta, in 3 cases.

Of these the sac occupied the lower portion of the abdominal aorta, in 1

The bifurcation of the aorta and the iliacs, in . . 2

In seven cases there were two or more ruptures. The rupture which probably occurred first was situated near the origin of the left subclavian artery, and the second below the arteria innominata, in . 1

The first rupture was below the arteria innominata, and the second near the aortic valves, in 1

The two ruptures were both near the aortic valves, in . . . 2

The first rupture was near the aortic valves, and the second near the arteria innominata, in 2

There was a healed and a recent rupture near the aortic valves, in . 1

There were three ruptures near the aortic valves, in . . . 1

The separation of the coats was not, however, always limited to the aorta but frequently extended along its larger branches, the arteria

innominata, the subclavian and carotid arteries, the cœliac axis, &c. In the descending aorta the intercostal arteries are often described as having been torn across, so that they appeared to arise from the newly-formed sac.

The *extent, direction, and depth of the laceration of the internal coats* varies in different cases. The rupture usually follows, when near the aortic valves, a transverse direction; sometimes, on the contrary, it is oblique or vertical; but, when at the descending portion of the arch, it is generally vertical. Ordinarily, about one-half or two-thirds of the circumference of the vessel is torn; but sometimes the laceration is of very small extent, and in other cases it involves nearly the whole circumference.

In the reports of the cases of dissecting aneurism which were first published, the internal coats were generally described as torn entirely through, and the separation which constituted the sac of the aneurism is usually stated to have been between the middle and external coat. Drs. Pennock and Goddard* found in the cases which they examined that the middle tunics were only partially rent, and that the sac was formed by the tearing apart of the laminæ of the middle coat; and the cases† which fell under my notice in the recent state, before the publication of my first paper, corresponded, in these respects, with those of the American authors. In consequence, also, of a suggestion in their paper, I was led to try the effects of injecting water into the trunk of the aorta after the laceration of the internal coats.‡ It was thus ascertained, that the middle coat, even of a healthy artery, readily admitted of being separated along the course of the vessel by water forced between the laminæ. I also found that, provided a layer of the middle tunic remained attached to the external coat, the water injected was retained in the newly-formed canal; but if the middle coat was entirely torn through and the fluid was extravasated between the middle and external coat, it transuded through the latter and no absolute separation of the tunics resulted. I am well aware that caution must be exercised in applying conclusions drawn from the injection of water into healthy vessels, to the explanation of the effects of the extravasation of blood during life. The inference seems, however, a fair one, that for the production of a dissecting aneurism the internal coat must not be entirely torn through, and that a layer of the middle coat must still remain attached to the external coat to form the outer wall of the sac.

* American Journal of Medical Sciences, vol. xxiii. 1839, p. 20.

† Case 1st, Dr. Patterson's, and Case 8th, Janet Jopp, in my first paper; and Dr. Henderson's case, Monthly Journal, 1843.

‡ Lond. and Edin. Monthly Journal of Medical Science, 1843.

These inferences have been, to a considerable extent, confirmed by the examination of various specimens of dissecting aneurism since that time; some too, in which the sac had been previously described as situated between the external and middle coats. Rokitansky, in his earlier memoir, had adopted the received opinion as to the seat of the sac; but in his recent work he states that he has since re-examined some of his specimens and has found them to confirm the view here expressed, though he does not regard the latter as in all cases correct. Further experience, however, only confirms the doubt, that it is possible for the outer coat of the artery alone to retain the blood forced out of the natural canal of the vessel sufficiently long to produce a dissecting aneurism.

The *extent to which the coats are ordinarily separated* varies considerably. Generally the sac occupies one-half or two-thirds of the circumference of the artery; but occasionally, and especially when the separation is continued from the trunk to its branches, the whole circumference of the artery is separated, so that a canal is formed entirely surrounding the original vessel.

Condition of the arterial tunics and of the heart.—The state of the coats of the aorta is reported in sixty, out of the eighty, cases collected.

They are stated to have been healthy, in . . . 2
Healthy, except with some milk spots, in . . . 1
Thickened, in 2
Atheromatous, in 8
Dilated, in 8
Dilated and variously diseased; thickened or thinned; softened or indurated; atheromatous or ossified, in . 34
The calibre of the vessel was contracted by the pressure of an aneurismal tumour, in 1
The vessel was greatly contracted or entirely obliterated in the seat of insertion of the ductus arteriosus, in . . 4

The state of the heart is reported in 48 cases:—

The organ was loaded with fat, in 3
It was large and loaded with fat, in 6
It was the seat of fatty degeneration, and displayed disease of the valves and of the coronary arteries, in . . 1
It was more or less hypertrophied and dilated, in . . 16
It was more or less hypertrophied and dilated, and the valves were diseased, in 12

The valvular disease being mitral, in . 1 case
Aortic, in . . . . 3 „
Aortic and mitral, in . . 8 „

The cavities were dilated and the walls thinned, in . . 4 cases.
There was concentric hypertrophy, in 2
The left side only was hypertrophied, in 3
The heart was healthy, but the valves slightly atheromatous, in 1

Mode of formation, &c.—For the production of the dissecting form of aneurism two circumstances seem generally required:—

1. That the internal coats should be unduly lacerable;

2. That the heart should have acquired increased power or should act with undue violence.

Of these two causes, the first seems the most important:—

1. From the reports of several of the published cases, the coats of the affected vessel seem to have undergone an acute change, so that they admitted of being torn and separated with the greatest ease. In other instances the ready lacerability of the coats is attested by there being two or more ruptures, which had occurred within a short period of each other or at more distant intervals. In yet other cases the change in the arterial tunics was a chronic one, the coats being loosely attached and rigid, so as to give way under slight distention. It is probably to this cause that the greater frequency of the affection in persons of advanced age and in females is to be ascribed. It is well known that the arterial tissues become more rigid and unyielding with the advance of life, and that the coats are more loosely attached and thinner in females than in males.

It will also be observed, that the internal ruptures most frequently occur in those situations upon which the blood impinges with the greatest force during the cardiac systole. Thus they are the most common near the aortic valves and in the ascending portion of the aorta, and especially on the anterior wall; next in frequency they occur at the commencement of the arch, or near the origin of the arteria innominata and in the transverse portion; then at the termination of the arch and commencement of the descending thoracic aorta; and lastly, in the abdominal aorta.

2nd. It would also appear that the immediate occurrence of the internal ruptures is generally connected with the operation of some cause which would give rise to over-action of the heart.

Thus, in five cases, there was serious obstruction to the transmission of the blood through the distal portion of the aorta,* and the frequency

* Obstruction in aorta: Jordan, North of England Med. and Surg. Journ., August, 1830 to May, 1831, vol. i. p. 101. Otto, Neue seltene Beobachtungen, Berlin, 1824,

of fatty degeneration of the heart and of atheroma in the aorta would render it probable that the smaller arteries were commonly the seat of disease. In another series of cases the heart was found hypertrophied and dilated, and the valves diseased; and yet in other instances the heart displayed general hypertrophy and dilatation, though without valvular disease.

In several of the cases also, the patients were first seized with the symptoms indicating the occurrence of the internal ruptures after active muscular exertion, or when they had been subjected to some mental excitement which would lead to undue action of the heart. In some cases, it is true, the causes thus operating were very slight; but they may yet have been sufficient, in persons in whom the arterial tissues were readily lacerable and the heart habitually acting violently, to occasion rupture of the coats.

Rokitansky* adopts a view different from that here maintained; he supposes that, in some cases at least, the disease is to be traced to a morbid condition of the external coat which causes its separation from the other tunics. The internal coats being thus deprived of support give way, and the blood becomes extravasated at the separated portion of the vessel. I have not met with any case in which the disease has apparently so originated; and if the first evil be in the external coat, it is difficult to conceive that it should possess sufficient power to resist the pressure of the blood, and yet without such pressure being exerted for some time, a dissecting aneurism could not be formed.

Duration of the disease, and cause of death.—In some cases of dissecting aneurism death is very rapid or instantaneous; but most generally the patient rallies more or less completely from the first symptoms, and dies suddenly or rapidly, after a longer or shorter interval. The symptoms first experienced are usually syncope and tearing pain behind the breastbone and down the course of the back; these symptoms may continue for a longer or shorter time or may indeed temporarily subside, and then a sudden accession of syncope ensues and rapidly terminates life. The former symptoms indicate the primary rupture and the separation of the coats; the sudden death, the period at which the external wall of the sac gives way and the blood is extravasated into some adjacent cavity. In some cases a remarkable series of symptoms due to the arrest

p. 66. Wise, Trans. of Med. and Phys. Soc. of Calcutta, vol. viii. pt. 2, 1842, p. 384. Barker, Med.-Chir. Trans., New Series, vol. xxv. 1860, p. 131. Aneurism: Boyd, Lancet, 1840-41, vol. i. p. 611.

* Manual of Path. Anat., Sydenham Society's Trans. vol. iv. p. 314.

of vascular supply to the brain or kidneys has been observed.* In yet other cases the patient recovers from the immediate symptoms and survives for a considerable period, sinking at last under the obstruction to the circulation and secondary affections resulting from the aortic disease.

The duration of life, or the period which elapses between the first and second set of symptoms, and the mode in which death ensues, is mainly influenced by the seat of the internal lacerations.

In fifty-seven cases in which the ruptures were situated near the aortic valves, the termination was by rupture of the external walls of the sac and the escape of the blood into the cavity of the pericardium, in . . . . . 40 cases.

Of these the patient was found dead, in . . 5
„ died suddenly, in . . 15
„ died rapidly, in . . . 4
„ survived one hour, in . . 1
„ „ one hour and a-half, in 1
„ „ five hours, in . 1
„ „ seven hours, in . 1
„ „ eight hours, in . 1
„ „ some hours, in . 1
„ „ sixteen hours, in . 1
„ „ eighteen hours, in . 1
„ „ less than one day, in 1
„ „ two days, in . . 2
„ „ four days, in . . 1
„ „ five days, in . . 1
„ „ eleven days, in . 1
„ „ seventeen days . 1
The disease was probably of long duration, in . 1

The sac ruptured into the pericardium, and there were old pericarditic adhesions, in . . . . . 3 cases.

Of these died suddenly . . 1
„ „ „ died rapidly . . 1

The sac ruptured into the cellular tissue of the mediastinum . 1 case.

Into the mediastinum and pericardium . . . . . 3 „

Of which was found dead . . . 1

The blood escaped into the cavity of the pericardium without distinct laceration, in . . . . . 2 cases.

* Todd, Med.-Chir. Trans. vol. xxvii. 1844, p. 301. Bennett, *Ibid.*, vol. xxxii. 1849, p. 157. Swaine, Path. Trans. vol. vii. 1855-56, p. 106.

Survived two days . . . 1
,, three days . . . 1

The sac ruptured into the cavity of the pericardium, and there was recent pericarditis, in . . . . . 2 cases.
The death being sudden, in 1
The symptoms of some months' duration, in . 1

The sac ruptured into the cavity of the chest, which not named, in 1
Sudden death while walking.

Death resulted from rupture of the right auricle, in . . 1
Survived four days.

Death resulted from symptoms of cardiac obstruction, in . . 4
The duration of the disease being uncertain, in . 1
One year 1
Eight years 1
Eleven years 1

The primary ruptures were at or near the origin of the arteria innominata, in . . . . . 8 cases.

Death ensued from rupture of the whole of the tissues of the arteria innominata, in 1
It occurred suddenly, and after walking.

From rupture of all the coats of the ascending aorta, in 1
The patient survived eighteen hours.

From the rupture of the sac into the cavity of the pericardium, in 5
Of these, died suddenly . . 3
,, died rapidly . . . 1
,, survived three days . 1

Death resulted from obstruction to the circulation, in . 1
The patient survived nine months.

The perforations were situated beyond the origin of the left subclavian artery or in the descending thoracic aorta, in . 7 cases.

Death ensued from escape of the blood into the texture of the right lung, the cellular tissue of the mediastinum, and into the cavity of the pericardium, but without distinct rupture, in 1
The patient died suddenly when walking.

The sac ruptured into the mediastinum and left pleural cavity, in 1
The patient died suddenly.

The sac opened into the left pleural cavity, in . . 2 cases.
The patient died suddenly, in . . 1
„ „ survived seven days, in . 1
Death resulted from obstruction to the circulation after three months, in 1
The patient died probably from obstruction to the circulation, in 1
From acute cerebral and renal disease, in . . . 1
In two cases, in which the disease was seated in the abdominal aorta, the patient died of tuberculous disease, in . 1
and with febrile symptoms connected with the arterial disease, in 1

1. It thus appears that when the internal ruptures are seated near the heart, or in the ascending aorta, or at the commencement or transverse portion of the arch, the probability is that the patient will die suddenly or only survive for a few days. The fatal result is usually in such cases determined by the escape of blood into the cavity of the pericardium or more rarely into the cellular tissue and left pleural cavity, or by the rupture of the whole of the coats of the vessel in some other part or of one of the cavities of the heart. The patient may, however, rally from the first effects of the shock and survive for some months or years, and die ultimately from the cardiac disease and symptoms of obstruction to the circulation occasioned by the formation of the aneurism, or from secondary disease of other organs.

2. When the internal ruptures are seated at the termination of the arch or in the descending portion of the thoracic aorta, the patient may also die suddenly or may only survive for a few hours or days, the fatal event being determined by the escape of the blood into the left pleural sac, or more rarely into the cavity of the pericardium or cellular tissue of the mediastinum. The patient is also more likely to survive than in the former case, and only to sink ultimately from secondary disease of the heart and other organs.

3. When the disease is situated in the abdominal aorta, the immediate effects of the rupture are less obvious, and the patient will probably die from slowly-induced disease of the heart and aorta or from other affections.

If the disease be situated near the origin of the aorta, when the sac ruptures the external laceration generally follows a longitudinal direction, and the pericardium may give way at the same time or may temporarily resist the pressure, so that blood may be effused beneath it and

into the cellular tissue of the adjacent parts. The pericardium may be extensively torn, or the blood may escape by a small opening, or may transude without any distinct fissure.

The specimens, exhibited to the Society by Dr. Bristowe and Mr. Gaskoin, are examples of dissecting aneurisms in the second stage, and correspond in their general features with such affections in the respective situations. In Mr. Gaskoin's case the primary laceration is situated quite at the origin of the aorta; it appears at first to have only passed through a portion of the middle coat, and the laminæ of that tunic are consequently separated to a limited extent. Subsequently, however, the rupture seems to have extended, the blood penetrated beneath the external coat and into the adjacent cellular tissue, and finally made its way through the covering of pericardium, so as to escape into the pericardiac cavity.

In Dr. Bristowe's case the primary ruptures are situated in the ascending portion of the aorta, and appear to have penetrated through only a part of the middle coat; an extensive separation of the laminæ of the middle coat ensued, and the sac ultimately ruptured into the cavity of the pericardium and the cellular tissue.

The coats of the vessel, in Mr. Gaskoin's case, were atheromatous; in Dr. Bristowe's, dilated and thinned. The state of the heart is not named in the former case; in the latter the organ was rather large.

Mr. Gaskoin's patient was a female, æt. 65, and had met with a slight accident three days before the occurrence of the fatal attack. Dr. Bristowe's patient was a man 27 years of age, and had felt faint after carrying a ladder. He died suddenly on the fifth day after the commencement of the symptoms. Dr. Peacock, *7th of April*, 1863.

TABLE OF CASES OF DISSECTING ANEURISM.

Name of Author, Date, and Reference.	Sex.	Age.	Situation of Rupture.	Situation of Sac.	Extent of separation.	Condition of Heart and Aorta.	Cause of Death.	Duration of Illness.	Previous History.
1. BURNS, Diseases of Heart, &c. Edin., 1809, p. 231. [Dr. Peacock's paper on Dissecting Aneurism, Ed. Med. & Surg. Journ., vol. lx. 1843, p. 276. Case 11.]	M	56	An irregular slit, about half-an-inch in length, in the proper coats	Between the external and middle coats	From the origin of the aorta to the arteria innominata	Heart flabby and loaded with fat; great dilation of the right side; aorta dilated, and coats thickened and osseous	Rupture of the right auricle	Died in four days from accession of severe symptoms	Had previously laboured under symptoms of cardiac disease; suddenly taken with constriction of the chest, and became collapsed
3. SHEKELTON, Dublin Hospital Reports, vol. iii. 1822, p. 231. Paper, Case 16.	—	—	Three inches above the bifurcation of the aorta	Sac formed an oblong tumour in the course of the aorta, and was lined by a distinct membrane	The sac opened into the right common iliac artery, 3 inches from its origin, and into the left, 1½ inches from origin	—	—	—	No history
2. LAENNEC, Traité de l'Auscultation Mediate, 2me ed. 1826, T. 2, p. 692. Paper, Case 15.	M	67	Rupture of internal coats, two inches from the turn of descending aorta	Sac found between external and middle coat, and involved two-thirds of circumference of vessel	The separation extended above to the arch and below to the iliacs, and passed along the cœliac artery, where it involved the whole circumference of the vessel	Arch of aorta dilated, and coats displaying osseous plates; concentric hypertrophy of left ventricle	Death from acute cerebral, combined with renal, disease	—	—

Name of Author, Date, and Reference.	Sex.	Age.	Situation of Rupture.	Situation of Sac.	Extent of separation.	Condition of Heart and Aorta.	Cause of Death.	Duration of Illness.	Previous History.
4. Ibid. Paper, Case 17.	F	Elderly	An aperture at the bifurcation of aorta	Sac lined by distinct membrane	Sac followed the course of left common iliac artery, and opened into it by two apertures	—	Death caused by tuberculous disease of lungs	—	—
5. Otto, Neue Seltene, Beobachtungen, Berlin, 1824, p. 66.	F	17	Rupture of internal coats immediately above aortic valves, one inch in length	Separation of the outer coat and extravasation of blood beneath it	Separation over a very limited space	Enlargement of ascending aorta, only two valves to aortic orifice; heart natural except some enlargement of left ventricle. Entire obliteration, distal to left subclavian artery	Blood in the cavity of the pericardium, from rupture of external coat and pericardium	8 hours	Suddenly taken after exposure to cold, with pain at the chest, followed by collapse
6. Moreau, Arch. Gén. de Méd. 7me année T. xix., 1829, p. 457.	F	55	Tear in coats of vessel situated immediately above aortic valve, and extending for a distance of 3 lines; proper tunics softened	Blood infiltrated under cellular coats	For a considerable extent along the aorta	—	Rupture of pericardium and external coat, and escape of blood into sac	—	Sudden death
7. Guthrie, Diseases and injuries of arteries, &c. London, 1830, p. 43.	—	—	Rupture of two internal coats beneath the arteria innominata; entire rupture of coats of arteria innominata	Sac reported to be situated between the external and middle coats, and to involve half the circumference of the vessel	The sac extended from the seat of the rupture to the origin of the aorta, and below to beyond the left subclavian artery	Ascending aorta greatly dilated and atheromatous	Death from rupture of the entire coats of the arteria innominata	—	Was asthmatic, and died suddenly, after making some exertion

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8. Guthrie, Ibid, Paper, Case 14.	—	—	Longitudional rupture in coats of aorta	Sac situated between middle and internal coats	Sac extending over a space of five inches in length	—	—	—	No history
9. Elliotson, Lumleyan. Lect., 1830, page 31. Paper, Case 6.	F	—	A transverse slit through the internal coats near the origin of the aorta	Sac formed by separation of external from middle coat	Sac of small size	—	Longitudinal rupture allowing of escape of blood into cavity of pericardium	The rupture of the internal coats was probably of old date	Admitted into Hospital with rheumatic affection and pain of side; taken suddenly with pain in the region of the heart, and immediate death
10. Jordan, North of England Medical and Surgical Journal, Aug., 1830, to May, 1831, vol. i. p. 101.	M	21	Rupture near origin of aorta	The sac situated below the external and middle coats	The separation involved the whole pericardial portion of the aorta	Ascending aorta dilated. Complete obliteration of aorta, distal to the origin of the left subclavian artery	Pericardium distended with blood, from rupture	—	Of dissipated habits; subject to fits; found dead in street
11. Elliotson, Clinical Lectures at St. Thomas's Hospital. Lancet, 1833, vol. i., p. 129.	F	—	Transverse rupture of internal and middle coats, near the origin of the aorta.	Separation of external coat from middle.	In the ascending aorta	—	Longitudinal rupture externally	Died in 5 hours	Taken suddenly when about 7 months' pregnant, after stooping, with severe pain and collapse; quite well before

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12. Dr. M'Lachlan, Glasgow Med. Journal, vol. i. p. 1, 1833, N. S. Paper, Case 5.	M	47	A transverse rupture, two inches above the semilunar valves, involving two-thirds of the circumference of the vessel.	—	—	Aorta natural	The sac opened into the pericardium, but without a distinct rupture.	2 days	Suddenly seized, when walking, with pain in the chest, and faintings; rallied partially, and then had a return of the syncope, and died
13. Statham, London Med. Gaz. vol. xvi. 1835, (vol. ii., 1834 & 35) p. 142.*	F	38	Rent in inner coats of aorta just above the origin of the vessel so large as to admit the thumb	Separation of cellular and elastic coats	From the heart to near the arch of the aorta in the convexity of the vessel	Inner coats of aorta much diseased and so soft as to be rubbed off by the finger-nail; some hypertrophy of the left ventricle and valves much thickened; thickening of the pericardium	Small opening by which blood had escaped into the pericardium	2 days	Of dissipated habits; seized while engaged at the wash-tub, and in advanced pregnancy, with pain at the side and prostration; died suddenly during night, 2 days after seizure
14. R. W. Smith, Dublin Journ. of Med. Science, vol. ix. 1836, p. 426. Paper, Case 3.	M	24	Rupture commencing close to aortic valves, and running first longitudinally, and then transversely for 2 inches	Sac situated between external and middle coats	Small sac	The aorta was dilated from its origin to the giving off of the arteria innominata; coats thinned, and internal membrane ulcerated	Oval aperture, by which blood escaped from sac into the pericardium	—	A blacksmith; never strong, and subject to dyspnœa

* A case is referred to by Hassé as published by Stosch in Casper's Wochenschrift, in 1834. Path. Anat., by Swaine, Sydenham Soc., 1846, p. 96.

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15. Ibid. Paper, Case 4.	F	70	Transverse laceration of internal coats, situated half-an-inch above origin of aorta, and half-an-inch long	Between the external and middle coats	From origin of aorta to giving off of arteria innominata	—	Death from rupture of outer coat and pericardium, and escape of blood into cavity of pericardium	—	Suddenly seized with pain, and became syncopic; rapidly died
16. Nivet, Bulletin de la Soc. Anat., 3me serie, T. 2.; 2me. année, 1836, p. 295.	F	68	Transverse tear immediately above the semilunar valves.	Separation of the middle from the external coat.	Sac occupied a square inch.	Aorta one-third larger than natural; cretaceous specks in coats, and coats thinned; valves with ossific vegetations; hypertrophy and dilatation of heart, especially of left ventricle	Blood had escaped into the pericardium, through a longitudinal rupture, one-and-a-half inch long	—	Sudden fall, and died in ten minutes
17. From Schweits' Zeitsch., B. iii. Heft 1, 1838, quoted in Arch. Gén. de Med. iiime. et nouv. serie T. iii., 1838, p. 344.	F	—	Aorta torn throughout its whole circumference immediately above the valves	Outer wall of the cavity formed by the pericardium	—	Aorta natural but middle tunic much softened & atheromatous at the origin of the arteria innominata; hypertrophy of left ventricle; valves healthy	Old false membrane on surface of pericardium; tear half-an-inch long in pericardium	—	Sudden death when undergoing examination for a charge of theft

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18. Goddard, American Journal of Med. Science, Phil. 1839, vol. xxiii. p. 20. Paper, Case 10.	—	—	A rupture three-quarters of an inch above the aortic valves, extending through half thickness of middle coat, nearly one inch in length.	Between the laminæ of the middle coat	Sac occupying half the circumference of the vessel, and extending from the origin of the aorta to the point of departure of eighth intercostal artery; extending also along the arteria innominata and left carotid and subclavian arteries	Heart large and fatty	Rupture of external part of sac and of pericardium, and escape of blood into cavity	7 hours	Suddenly seized with pain and faintness
19. Pennock, American Journal of Med. Science, vol. xxiii., p. 13. Paper Case 18.	F	95	Fissure half-an-inch above semilunar valves, penetrating through half the thickness of middle coat.	Between laminæ of the middle coat	Separation extending from the origin of the aorta to its bifurcation, and along the arteria innominata, and carotid arteries; openings between sac and vessel	Heart double its natural size; great hypertrophy and dilatation of left ventricles, and dilatation of heart; valvular disease	Died of cardiac disease	8 years	Suddenly seized while engaged in pumping, and the usual cardiac symptoms continued, and ultimately proved fatal
20. Boyd, Lancet, 1840-41, vol. i., p. 611.	F	70	Inner and middle coats ruptured, about an inch above aortic valves	Cellular tissue, dissected from the middle coat.	From the commencement of the aorta to the origin of the left subclavian artery	Aorta reduced in size from compression by aneurism. Heart of natural size, but loaded with fat	Cellular substance infiltrated with blood	48 hours	Suddenly seized with symptoms of collapse, and never rallied

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21. Ibid.	M	68	Rupture of inner and middle coats about 1 inch above valves, following a T-shape, $\frac{3}{4}$ of an inch in one direction and half an inch in the other.	Cellular coat separated from the middle tunic.	The separation extended along the whole length of the thoracic aorta as far as the diaphragm. The blood also followed the course of the coronary arteries	Lining membrane of the aorta atheromatous. Heart considerably enlarged, but valves healthy	Pericardium filled with blood which had escaped from two small openings; blood also infiltrated into the cellular tissue	16 hours	While in a fit of passion, was seized with pain at the chest, and rapidly became collapsed
22. Tessier, Giornale della Scienza Mediche, 1842, quoted in Gaz. Med., de Paris, T. x. 1842, p. 524. Paper, Case 7.	M	60	Transverse rupture of internal coats, near the origin of the arteria innominata.	Sac between external and middle coats.	Separation extended from the commencement of the arch of the aorta to the popliteal artery on the left side, and also passed along the arteria innominata and its branches to the internal carotid, and in the latter situation surrounded the whole circumference of the vessel.	—	Rupture of external coat and escape of blood into the pericardium	3 days	Seized with symptoms regarded as apoplectic, and died collapsed
23. Peacock, Ed. Med. and Surg. Journal,	F	56	A transverse rupture two inches in length, situated one inch above the	A separation of the laminæ of the middle coat.	Extending upwards on the front of the aorta for one inch above the rupture	Ascending aorta very much dilated and coats atheromatous,	A longitudinal rupture 8 lines in length, through external wall of	—	Found dead in bed; no history of previous cardiac disease

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No. 157, vol. lx. p. 276, 1843. Case 1, Dr. Patterson's			aortic valves; edges of rupture irregular and ragged		and downwards to the heart; channel not wide	and small sacculated expansion; great dilatation of heart and thinning of the walls of the left ventricles	sac and pericardium, and allowing of escape of blood into the cavity of the pericardium		
24. Ibid. Case 2nd, Preparation in Museum of the Royal College of Surgeons.	—	—	An oblique and transverse rupture about one inch in length, situated two inches above the aortic valves	—	Sac about 2 inches square	Ascending portion and arch of aorta considerably dilated, and coats thickened and atheromatous	A longitudinal rupture about 1 inch in length, opening into the cavity of the pericardium	—	No history
25. Ibid. Case 8. Own Case.	F	84	A transverse rupture $\frac{3}{4}$ of an inch behind the origin of the left subclavian artery, extending round nearly the whole artery; a second below the origin of the arteria innominata, running transversely and nearly one inch in length	The sac formed between the laminæ of the middle coat	The separation extended upwards to the origin of the aorta and downwards to the commencement of the abdominal aorta; it passed also along the large branches; the intercostal arteries were connected with the sac; the separation involved $\frac{3}{4}$ of the circumference of the vessel	Aorta dilated and coats thin and atheromatous; heart natural as to size, but fatty and flaccid	The blood escaped from the sac into the pericardium, evidently through the cellular tissue, but no distinct rupture; blood also escaped from cellular tissue into the right lung	—	Patient died suddenly in the street, while ascending a steep but short hill; she had had dropsy a year and a-half before, but was not known to have suffered from any other disease

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26. Ibid. Case 12. Preparation in Museum of Royal College of Surgeons of Edinburgh.	—	—	An opening about the size of a sixpence, about half-an-inch above the aortic valves, probably the result of ulceration	—	The sac was confined to the ascending aorta, and was about two inches long, and one and a-half wide	Ascending aorta dilated and coats thickened and corrugated	The sac opened into the pericardium	—	No history
27. Ibid. Preparation in Museum of Royal College of Surgeons of Edinburgh.	—	—	A small oval aperture, probably resulting in ulceration, situated behind the origin of the left subclavian artery	—	The sac extending upwards along the course of the aorta to the heart, and probably also involved the coats of the arteria innominata; the separation extended round two-thirds of the circumference of the vessel	The coats of the aorta were thickened	Death probably resulted from the obstruction to the circulation	—	No history
28. Henderson, Edinburgh and London Monthly Journal of Medical Science, July, 1843, vol. iii. p. 613. Paper, Case 19.	F	60	A smooth longitudinal aperture, immediately behind the origin of the arteria innominata, one inch and 1-10th in length	Sac situated between the laminæ of the middle coat and lined by a smooth yellow membrane	The sac formed by the separation of the coats extending along the course of the aorta, first in front and then on its left side, from the origin of the arteria innominata to the bifurcation of the vessel, and opened by a	The ascending aorta was dilated and its coats thinned, but not atheromatous; the cavities of the heart were dilated and the walls hypertrophied; the aortic and mitral	Death resulted from obstruction to the cardiac circulation; adhesions between the attached and reflected pericardium	9 months	The patient, previously not in good health, was seized suddenly, on rising from the ground after scouring a floor, with pain at the heart, sense of something having

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					small oval aperture into the left common iliac artery; the branches given off communicated, some with the sac, others with the original vessel; the sac was considerably dilated at the upper part of the abdomen; the original trunk was compressed.	valves slightly thickened			given way, and became collapsed; she continued ever after to suffer from cardiac symptoms; for three months she had been dropsical
29. RYAN, Lancet, 1843-44, vol. i. p. 688.	—	—	Oblique rupture at the origin of the aorta	Thin layers of blood extravasated between the external and middle coats	—	Concentric hypertrophy of heart; no ossification or obstruction of the aorta	Pericardium filled with blood which had escaped from a rupture sufficiently long to admit the handle of a scalpel	—	Had suffered from a pain in the stomach and dyspnœa, &c., but was left in usual health, and found dead half an hour after
30. ROKITANSKY, Handbuch, 1842-44, Sydenham Society's Transl. vol. iv. p. 314.	F	52	A transverse rupture extending nearly across the vessel shortly above the aortic valves	Separation of the external from the middle coat	The separation was entire, from the origin of the aorta to the arteria innominata, and partial down the abdominal aorta to the iliacs, the sac ex-	Both aorta and pulmonary artery very much dilated; heart somewhat large and displaying fatty deposits;	Tearing of cellular coat and rupture into the sac of the pericardium	—	Patient taken ill and fell in the street, and died the following morning

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This case was first published, with others, in 1837.					tending also along the large branches and opening into the left subclavian artery	ossification of coronary arteries			
31. WISE, Trans of Med. and Phys. Soc. of Calcutta, vol. viii., part 2 (1842), p. 384.	M	Middle aged	Tearing of the external coat to the extent of an inch-and-a-half, commencing immediately above the aortic valves and extending obliquely upwards	Separation between cellular & muscular coats	At ascending portion of the aorta	Ascending aorta enlarged; entire obliteration of canal beyond the left subclavian artery; heart's walls thin	The blood escaped from the sac into the cavity of the chest	—	Sudden death while walking
32. KIRKPATRICK Dublin Journal, vol. xxiv., 1844, p. 283.	M	60	Rent in coats of aorta	Coats separated and dissected completely round	—	Aorta dilated, aortic valves atheromatous	Blood effused into the pericardium	—	Suddenly seized with pain at the chest and collapse, and died in a few hours
33. LEES, Dublin Journal, vol. xxv., 1844, p. 170.	F	60	A transverse rent in the internal and middle coats an inch in extent, and originating an inch and a-half above the valves	Separation of the external from the middle coat	The separation extended from the heart to the arch and descending portion of the thoracic aorta	Atheromatous deposits in coats of aorta and large vessels; hypertrophy of the heart, and deposit on aortic and mitral valves	Pericardium displaying old adhesions in places; blood in pericardium, which had escaped from a rupture of cellular coat at posterior part of ascending aorta	—	The patient was in perfect health up to the day of her death; she suddenly fell back and died in five minutes

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34. TODD, Med.-Chir. Trans., vol. xxvii., 1844, p. 301.	M	37	About half-an-inch above the free edge of the semilunar valves; a small ulcer and transverse rent	The laminæ of the middle coat separated	The separation extended from the origin of the aorta to the arch, along the large vessels for some distance, and down the course of the abdominal aorta	The arch of the aorta was much dilated, and the coats somewhat atheromatous; the left ventricle displayed concentric hypertrophy, and the semilunar valves were somewhat diseased	Pericardium distended with blood from rupture of external coat	11 days	The patient was suddenly taken, when in usual health and while at dinner, with syncope, followed by pain in loins and groins, hemiplegia and suppression of urine, and died convulsed, in eleven days; softening of parts of brain about right ventricle, and very exsanguine state of that side of brain; ascribed to obstruction of circulation in carotids
35. MACDONNELL, Dublin Journal, vol. xxvi., 1845, p. 454.	M	50	A clean cut-like laceration, situated one inch above the origin of the aorta; and extending transversely for one inch and three-eighths through internal and middle coats	The sac was situated between the external and middle coats	The separation advanced from the aortic origin to the arteria innominata, and along the left subclavian and carotid arteries	Aorta dilated, atheromatous, and bony in places; semilunar valves displaying atrophy of the curtains; left ventricle hypertrophied and dilated	The external coat had given way, and blood had escaped into the sac of the pericardium	1 hour	The patient had been out walking the day before, was taken with pain and syncopic symptoms during the night, and died in about an hour

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36. Thompson, London Med. Gazette, vol. xxxvii., 1846, p. 584.	M	45	Half-an-inch above the aorta valves a rent extending through part of the middle coat eight-tenths of an inch long	The blood was forced between the cellular and middle coat	The separation extended from the origin of the aorta to the descending aorta, and passed along the arteria innominata and left carotid and subclavian arteries	The aorta was large, but its coats did not present deposit near the seat of the laceration; the heart was considerably enlarged and its walls thickened, and especially the left ventricle was hypertrophied	Blood was contained in the cavity of the pericardium, but there was no distinct rent by which it had escaped	3 days	The patient was first taken with violent pain in the bowels, ascribed to indigestible food; relieved by treatment, and rallied; then became worse, and died suddenly, with head-symptoms, and syncopic, in three days
37. Farr. London Med. Gazette, vol. xl., 1847, p. 1116.	M	88	Half-an-inch below the left subclavian artery, irregular rent in the form of a flap, each side seven lines long, through external and middle coat	The outer coat separated from the internal and middle over the whole circumference	The separation extended for the space of four inches along the aorta	The whole thoracic aorta was atheromatous and thickened; the heart was healthy, but the valves slightly atheromatous	The outer coat of the vessel was torn through at left subclavian artery, and blood escaped into left pleural sac	—	A sawyer, and worked at his occupation till four years before his death, and never known to have had any illness; suddenly seized with symptoms of collapse, and died in five minutes

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38. Crisp, Structure, Diseases, &c., of Blood-vessels, 1847, p. 169. Preparation in Museum of St. Thomas's Hospital.	M	69	Transverse but irregular rupture of internal and middle coats; situated two inches and a-half above aortic valves	Separation of external from the middle coat	Separation extending from the origin of the aorta to the arch	Coats of aorta very lacerable, and atheromatous and bony; heart's cavities dilated and walls thin	Pericardial sac distended with blood	1½ hour	Suffered under melanosis of eye. While in Hospital was suddenly seized with pain in the chest; became syncopic, and died in an hour and a-half
39. Johnson, Path. Trans., vol. i., 1846-47, and 1847-48, p. 244.	M	42	A zigzag laceration of the internal and middle coats just above the aortic orifice	Separation of the external from the middle coat	Extending upwards from the seat of rupture for two inches	Ascending aorta much dilated, and inner coats thickened and roughened by opaque deposit	Pericardium distended by blood, which had escaped from a small oval opening	—	Sudden death
40. Bouillaud, Arch. Gén. de Méd., 4me ser., T. xv., 1847, p. 248. Described as an anomaly of the Aorta.	M	36	Two openings from the left ventricle, communicating with canals which are reported as double aortæ	—	These two trunks followed the whole course of the aorta, and opened into common iliacs; the other branches were, some connected with one canal, others with the other	Heart very large, and weighed 650 grammes; white spots on pericardium; great hypertrophy and dilatation of cavities, and valves diseased	Obstruction to circulation	1 year	The symptoms commenced suddenly a year before death, after making an effort. They were those of cardiac disease and continued till death
41. Cruveilhier, Bullet. de la	M	40	Tearing of the tissues of the aorta	—	Dissecting aneurism of aorta and arteria innominata	—	Blood effused in pericardium	—	The patient complained of colic pains, and

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Soc. Anat., 24me année, 1849, p. 227.									died suddenly during the night
42. PIRRIE, Monthly Journ. of Med. Sc., vol. viii., N. S., vol. ii., 1848, p. 363.	M	50	Rent in inner and middle coats of aorta at the arch, near the origin of the left subclavian artery, involving two-thirds of the circumference of the vessel	External coat separated from the middle	The separation extended above to the origin of the aorta, and an inch below the rent	Aorta atheromatous; slight hypertrophy of left side of heart	—	—	Sudden death
43. BENNETT, Med.-Chir. Trans., vol. xxxii., 1849, p. 157.	M	52	Transverse rupture, extending for three-quarters of an inch, beneath the origin of the left subclavian artery, at the upper and outer part of descending aorta	The separation was chiefly between the laminæ of the middle coat; partly between the external and middle coats	The separation extended along the course of the aorta as far as the iliacs	Aorta atheromatous; heart enormously enlarged; mitral and aortic valves slightly thickened	Blood had escaped into mediastinum and left pleural sac	—	The patient had been three years hemiplegic and suffered latterly from dyspnœa, palpitation, &c. She died suddenly, and blood was found to have been extravasated in pons Varolii and corpus striatum
44. PEACOCK, Monthly Journal of Med.	M	44	An irregular slit immediately behind the arteria innominata, ex-	The sac was formed in the layers of the middle coat	The dissecting aneurism was situated at the arch and in the descending aorta, and	Ascending aorta much dilated and coats thin, and in places	A transverse slit about an inch in length, through the	18 hours	Suffered from palpitation for twelve years, since receiving a

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Science, vol. ix. (N. S. vol. iii.) p. 1052, 1849.			tending through only a portion of the middle coat		extended from the arteria innominata for about four inches	atheromatous; heart very large (twenty ounces); old lymph in pericardium; aortic valves diseased and incompetent, mitral also thickened; general hypertrophy and dilatation	whole of the coats of the aorta, near the valves, allowing the escape of blood into the sac of the pericardium		blow on the chest; symptoms of obstructive and regurgitant disease of the aortic valves. Suddenly taken in the morning, after being hurried and excited, with pain in the region of the heart, urgent dyspnœa and collapse, and died in about eighteen hours
45. Follin, Comptes Rendus et Mémoires de la Société de Biologie, 1re année, 1849, Paris, 1850, p. 202.	F	Aged	Transverse tear, about a centimetre in length, at the convexity of the arch	Extravasation of blood beneath the cellular coat	The sac occupied the portion of the aorta covered by the pericardium	The coats of the aorta healthy, except that there were some milky spots	Pericardium distended with blood, which had escaped from a rupture of the cellular coat at the commencement of the arch of the aorta; the rupture being in the most prominent part of the extravasated blood	—	No history. Body dissected at the Ecole Pratique

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46. Sainet, Bullet. de la Soc. Anat., 26me année, 1851, p. 25.	M	42	A tear of the internal coats of the aorta, following a transverse direction and occupying one-third of its circumference, and situated immediately above the aortic valves	—	The sac was of small size	Coats of the aorta not thickened or bony	Pericardiac cavity filled with blood, which had escaped from a rupture the size of a pin's head	—	The patient had become rapidly paraplegic. He died suddenly
47. Broca, Bullet. de la Soc. Anat., 27me année, 1852, p. 273.	F	77	A rupture of the internal coats of the aorta below the origin of the arteria innominata	The external coat remained entire and formed the boundary of the extravasation	The separation extended downwards, in the course of the aorta, from the seat of rupture	The aorta was uniformly dilated and its coats atheromatous, & the internal tissues were eroded in places	The blood had escaped into the cavity of the pericardium by the rupture of the external coat	—	The patient died suddenly in a fit of passion
48. Goupil, Bullet. de la Soc. Anat., 28me année, 1853, p. 276; Case under the care of M. Briquet, and accompanied by a Report by M. Leudet on similar cases.	M	52	The rupture was oblique and resembled a cut, and was situated above the aortic valves	The aneurismal sac was found below the outer coat and between it and the middle	The separation extended from the origin of the aorta to the arteria innominata; along that vessel and its branches, then along the left carotid and subclavian arteries, and into abdominal aorta: it communicated with the trunks of some of those vessels, and there were openings	Heart large; aortic valves thickened and scarcely competent	Fluid contained in the pericardium. Death from cardiac obstruction	11 years	Suddenly attacked in 1842, when in the street, and without obvious exciting cause, with faintness, followed by cardiac symptoms, and survived till 1853, suffering all the time from palpitation, dyspnœa, &c.

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					in other parts between the sac and the original trunk				
49. CADET GASSICOURT, Bullet. de la Soc. Anat., 30me année, 1855, p. 352.	F	33	A very irregular opening, as if produced by a tear of the two internal coats, shortly above the aortic valves	Separation bounded by the external coat and situated between the external and middle coats	To very slight extent	Great hypertrophy and dilatation of the heart, with thickening of the aortic valves	Old adhesions of the pericardium: died from cardiac obstruction	Uncertain	Repeated attacks of Rh. Ac., and symptoms of cardiac disease of eighteen years' duration
50. VIBERT, Bullet. de la Soc. Anat. 31re année, 1856, p. 85.	F	71	A perpendicular rupture, commencing three centimetres from the origin of the aorta, and two centimetres in length	The separation was situated between the external and middle coats	The separation occupied the anterior surface of the aorta, and extended from its origin to the arteria innominata	Aorta dilated and coats atheromatous and roughened at the cross; slight induration of the valves and hypertrophy of the left ventricle	Irregular laceration, by which blood had escaped into the cavity of the pericardium	—	Sudden death
51. LABORDE, Comptes Rendus et Mémoires de la Société de Biologie, T. Ire de la iiime ser. année, 1859, Paris, 1860. p. 30.	M	74	Longitudinal rupture at the origin of the aorta	Separation between the pericardiac covering and the cellular coat of the aorta	At the origin of the aorta	Some dilatation of the aorta, and slight specks of atheroma and bone; heart somewhat hypertrophied	A longitudinal rupture of the pericardium, allowing the blood to escape into the sac	—	An old inmate of the Bicêtre, bedridden. Sudden attack and death before the interne reached him

Name of Author, Date, and Reference.	Sex.	Age.	Situation of Rupture.	Situation of Sac.	Extent of separation.	Condition of Heart and Aorta.	Cause of Death.	Duration of Illness.	Previous History.
52. BARKER, Med.-Chir. Trans., N.S., vol. xxv., 1860, p. 131.	M	24	A laceration an inch and a-quarter long, situated from half-an-inch to three-quarters of an-inch above the aortic valves, a second smaller rupture behind this	The separation between the cellular coat and the pericardium	The separation was limited to the origin of the aorta and the adjacent parts of heart	Congenital fusion of two of the aortic valves; dilatation of ascending aorta; great contraction or entire obliteration of aorta distal to left subclavian artery of heart	Rupture into the pericardiac sac and escape of blood, with results of pericarditis	17 days	Sudden attack while lacing his boot, with pain in the left side of head, passing to left arm and side and across part of chest, with dyspnœa, palpitation, &c. The symptoms continued, and he died suddenly
53. LATHAM and SWAINE, Path. Trans., vol. vii., 1855-56, p. 106.	M	51	Transverse and circular rent of internal and middle coats of aorta, a few lines below the origin of the left subclavian artery, partly clean, as if cut with scissors, partly ragged	The external coat of the aorta separated from the middle	The separation extending to the common iliac arteries	Heart very large, firm, and heavy; left ventricle dilated and walls thickened; mitral and aortic valves diseased	Died from symptoms of obstruction to circulation, &c.	3 months	When labouring under symptoms of old disease of heart, suddenly seized when walking with pain at the chest, and felt as if something had burst, followed by loss of power over lower extremities. The nature of the disease diagnosed during life

Name of Author, Date, and Reference.	Sex.	Age.	Situation of Rupture.	Situation of Sac.	Extent of separation.	Condition of Heart and Aorta.	Cause of Death.	Duration of Illness.	Previous History.
54. CALLENDER, Path. Trans., vol. viii., 1856-57, p. 164.	F	—	Transverse rent in inner and part of middle coats of aorta, situated two inches and a-half below the left subclavian artery, and extending through two-thirds of circumference of the vessel	The separation was between the layers of the middle coat	The separation extended from the origin of the left subclavian artery to the point of exit of renal artery. The sac formed an oval tumour at its upper part	The thoracic aorta was greatly dilated and atheromatous, and displayed small pouches in places. The left cavities of the heart were dilated, but otherwise healthy	The sacculated portion of the aneurism was ruptured, and the blood had escaped into left pleural sac	7 days	Had sustained injuries and died suddenly seven days after
55. WILKS, Path. Trans., vol. xi., 1859-60, p. 58.	F	62	Three ruptures about one and a-half to two inches above the aortic orifice, following a longitudinal and transverse course, involving the internal and middle coats	The sac was situated between the middle and external coats, and only a few fibres of the middle were separated with the external coat	The separation extended upwards to behind the valves and along the greater curvature of the aorta to the origin of the left carotid artery	Aorta greatly dilated and atheromatous; coronary arteries diseased; muscular structure of heart somewhat fatty and valves slightly rigid	A longitudinal rupture of the external coat, by which blood had escaped into the sac of the pericardium	5 days	Suddenly attacked with syncopic symptoms after walking and ascending stairs, followed by pain at chest. Partial rally, and death suddenly five days after
56. MITCHELL, Med. Times and Gazette, vol. ii., for 1860, p. 208, Case at London Hospital.	M	45	An elongated tear of the inner coats of the aorta at the posterior part of the ascending portion	The separation was partly between the external and middle coats, partly beneath the pericardium	Involved the pericardiac portion of the ascending aorta	Aorta, from its origin to the arch, greatly dilated	A rupture of the pericardium, by which the blood escaped into the sac	—	Suddenly seized when rising to whip a horse, and became insensible, and collapsed, and was apparently in great pain. Died in a few minutes

Name of Author, Date, and Reference.	Sex.	Age.	Situation of Rupture.	Situation of Sac.	Extent of separation.	Condition of Heart and Aorta.	Cause of Death.	Duration of Illness.	Previous History.
									after admission into the Hospital
57. Wilks. Path. Trans., vol. xii., 1860-61, p. 67.	F	75	A vertical fissure above the bifurcation of the aorta, about an inch in length, involving the internal and middle coats	The sac bounded externally by the outer coat, and situated within the coats	The sac followed the course of the vessel for five inches and was about two inches wide	Inner coat of the aorta extensively diseased, displaying osseous plates and fissures	Which under notice displayed febrile symptoms	—	No history. Only in the Hospital three days. Doubtless of old date
58. Dickinson, Path. Trans., vol. xiii., 1861-62, p. 48.	M	32	A transverse rent of the inner coats, half-an-inch above the aortic valves, involving two-thirds of the circumference of the vessel	The separation was at first between the middle and external coat, and afterwards between the layers of the middle coat	From behind the aortic valves through the thoracic portion of the aorta	Lining membrane of the aorta free from disease, except two or three specks of atheroma; heart rather large	The outer coat was ruptured so as to allow blood to escape into the pericardium	Less than one day	A policeman suddenly seized after having been seven hours on his beat, with loss of power over lower extremities, and collapse; partially rallied and suffered pain, dyspnœa, and palpitation; and died suddenly in less than twenty-four hours
59. Bristowe, Path. Trans., 1862-63.	M	27	Long transverse rent through the internal and part of middle coat in	Between the layers of the middle coat, a small portion of	Over a considerable portion of the ascending aorta	Ascending aorta dilated and coats thinned, but not diseased	Longitudinal rent of the outer wall into the cellular tissue	4 days	Seized on Saturday when carrying a ladder with faintness,

Name of Author, Date, and Reference.	Sex.	Age.	Situation of Rupture.	Situation of Sac.	Extent of separation.	Condition of Heart and Aorta.	Cause of Death.	Duration of Illness.	Previous History.
			the ascending portion of the aorta	the middle being reflected with the external			and pericardium; cavity found distended with blood		followed by pain in the region of the heart; on Wednesday had a return of pain and difficulty of breathing, and died in a short time
60. GASKOIN, Path. Trans., 1862-63.	F	65	Longitudinal rupture immediately above the valves, through first a part, and then the whole of the middle coat	The separation was first in the layers of the middle coat, then between the middle and external coats	Small extent of separation at the origin of the aorta	Aorta atheromatous and aortic valves diseased	Rupture first into the cellular tissue, and then into the pericardium	—	Found dead in bed. Had had a fall two or three days before
61. ROKITANSKY, Ueber einige der Wichtigsten Krankheiten der Arterien, Wien, 1852, Several of these cases had been previously published in 1837. BEOBACHTUNG 23.	M	76	Transverse rupture of internal coats of aorta near origin	The separation between the external and middle coats	The separation extended from the origin of the aorta to the point of departure of the left subclavian artery	Aorta dilated; heart large and fatty; ossification of aortic valves	The sac ruptured into the cavity of the pericardium	—	Sudden death

Name of Author, Date, and Reference.	Sex.	Age.	Situation of Rupture.	Situation of Sac.	Extent of separation.	Condition of Heart and Aorta.	Cause of Death.	Duration of Illness.	Previous History.
62. ROKITANSKY. BEOBACHTUNG 24.	M	63	Transverse rupture of internal coats of ascending aorta	Separation of the external from the middle coat	The separation extended to the arch and reopened into the vessel	Aorta dilated and atheromatous; old disease of the heart; very great hypertrophy and dilatation	The sac ruptured into the pericardium, where also there were old adhesions	Died in about 18 hours	Sudden death after an attack of pneumonia; had had several attacks of Rh. Ac., and for several years suffered from palpitation and dyspnœa
63. *Ibid* BEOBACHTUNG 25.	F	52	Rupture situated above the aortic valves	The external coat and a portion of the middle separated	The separation occupied the ascending portion of the aorta	Aorta dilated and coats thickened, and with osseous plates; hypertrophy and dilatation of heart	Ruptured into the pericardium	—	Sudden death
64. *Ibid.* BEOBACHTUNG 26.	F	52	Tearing of the coats of the artery above the valves	External coat separated	The separation extended to commencement of the abdominal aorta	—	—	—	Sudden death
65. *Ibid.* BEOBACHTUNG 27.	F	78	Transverse rupture of the internal coats shortly above the valves	The external coat and a part of the middle separated	The separation extended from the commencement of the aorta to the arch	Aorta dilated and coats thickened with osseous plates; heart large and some mitral disease	Ruptured into the pericardium	—	Sudden death

Name of Author, Date, and Reference.	Sex.	Age.	Situation of Rupture.	Situation of Sac.	Extent of separation.	Condition of Heart and Aorta.	Cause of Death.	Duration of Illness.	Previous History.
66. *Ibid.* BEOBACHTUNG 28.	M	60	Transverse tear of internal coats between the arteria innominata and left carotid	The external coat separated from the middle	At the arch near the seat of rupture	Aorta dilated; heart hypertrophied and dilated	Ruptured into the pericardium	—	Sudden death
67. *Ibid.* BEOBACHTUNG 29.	M	22	Two tears shortly above the valves, one transverse, the other longitudinal	External coat separated from the middle	From the origin of the aorta to beyond the arch	Aorta dilated; heart hypertrophied and dilated	Ruptured into the pericardium	Some hours	Sudden seizure
68. *Ibid.* BEOBACHTUNG 30.	M	80	Transverse tear above the aortic valves, and a second before the origin of the arteria innominata	Separation of the external coat	Over a portion of the ascending aorta	Aorta dilated and coats diseased; heart hypertrophied and dilated	Ruptured into the pericardium	—	Sudden death
69. *Ibid.* BEOBACHTUNG 31.	M	70	Two transverse tears, one near the valves, the other below the origins of the arteria innominata and left carotid artery	The outer and part of the middle coat separated	At the ascending aorta and arch	Aorta dilated and coats thickened and diseased	Ruptured into the pericardium	—	Sudden death
70. *Ibid.* BEOBACHTUNG 32.	M	74	Long tear of internal and part of middle coat above the valves	External coat and part of the middle separated	Over the whole thoracic aorta, and the sac dilated	Coats of aorta thickened; heart hypertrophied and dilated	Ruptured into the pericardium and mediastinum	—	Taken in street, and rapidly died

Name of Author, Date, and Reference.	Sex.	Age.	Situation of Rupture.	Situation of Sac.	Extent of separation.	Condition of Heart and Aorta.	Cause of Death.	Duration of Illness.	Previous History.
71. *Ibid.* BEOBACHTUNG 33.	M	60	Long tear above the valves of internal and part of middle coat	External and part of middle coat separated	From the origin of the aorta to its bifurcation	Aorta dilated, and coats diseased; heart large	Ruptured into the pericardium	—	Sudden death
72. *Ibid.* BEOBACHTUNG 34.	F	55	Horizontal tear of the internal coats above the valves	External separated from the middle coat	Near the seat of the internal rupture	Aorta dilated; heart large and flaccid	Ruptured into the pericardium	—	Sudden death
73. *Ibid.* BEOBACHTUNG 35.	F	73	Long tear of the internal coats above the valves	External coat separated from the internal coats	In the neighbourhood of the internal tear	Aorta dilated, and coats with osseous plates; heart fatty	The sac ruptured into the pericardium	—	Sudden death
74. *Ibid.* BEOBACHTUNG 36.	M	56	Tear of the internal coats immediately behind the valves	Separating the valves from the coats of the vessel	At the seat of the tear	Heart enlarged and fatty	Endocarditis; escape of blood into the pericardium	—	Symptoms of disease of the heart of some months' duration
75. *Ibid.* BEOBACHTUNG 37.	M	44	A recent and irregular tear of the inner coats, with a healed rupture immediately above the valves	The external coats separated from the internal	At the seat of rupture	Aorta dilated and coats diseased; heart hypertrophied and dilated	Tear of the outer coat and pericardium and escape of blood into the sac	—	Sudden death
76. *Ibid.* BEOBACHTUNG 39.	F	23	Recent laceration of the internal coats above the valves, with a healed tear in connection with it	Blood extravasated beneath the external coat	For a small space near the rupture	Ascending aorta dilated; two valves to aortic orifice; left side of heart hypertrophied and dilated	Rupture of the external coat and pericardium and escape of blood into cavity	—	Sudden death

Name of Author, Date, and Reference.	Sex.	Age.	Situation of Rupture.	Situation of Sac.	Extent of separation.	Condition of Heart and Aorta.	Cause of Death.	Duration of Illness.	Previous History.
77. *Ibid.* BEOBACHTUNG 42.	F	50	Tear of internal and part of middle coat near the origin of the aorta	Separation of the external and some portion of the middle coat	Over the whole of the ascending aorta	Ascending aorta dilated and coats diseased; heart large and fatty	The sac ruptured into the pericardium	—	Died during the night
78. *Ibid.* BEOBACHTUNG 43.	F	48	Tear of inner and part of middle coat, shortly above the aortic valves	Separation of external and layer of middle coat by extravasated blood	At the seat of rupture	Aorta dilated and its coats diseased; aortic valves diseased; heart hypertrophied and dilated	Ruptured into the pericardium	—	Died during the night
79. *Ibid.* BEOBACHTUNG 44.	M	51	Tear of the inner coats of the ascending aorta	Separation of the outer coat	Near the seat of rupture	Aorta dilated and coats thickened and much diseased	The outer coat was torn and blood had escaped into the pericardium	—	Sudden death
80. *Ibid.* BEOBACHTUNG 45.	M	73	Irregular tear of internal and part of middle coat, shortly above the valves	Separation of the outer from the middle coat by extravasated blood	Near the seat of rupture	Ascending aorta dilated into a sac, and coats indurated; heart large and walls thickened and loaded with fat	The outer coat was torn and then ruptured into the pericardium	—	Sudden death

13. *Two specimens, showing the condition of the heart after death from different forms of phthisis—Destruction of one supra-renal capsule without bronzing—Supernumerary valve at orifice of pulmonary artery.*

The first specimen displayed atrophy of the heart, the organ having only weighed seven ounces and a-quarter avoirdupois, and its cavities were of very small size, from having undergone contraction with the diminution in the amount of blood in the system, while their walls had become proportionately thicker than usual. The specimen was removed from the body of a man who died of uncomplicated phthisis, at the age of twenty-six. The lungs contained both softening tubercle and cavities.

In the second specimen the heart weighed nine ounces fourteen drachms, and was somewhat increased in size and weight, and displayed several large white patches upon its surface, and thin adhesions between the vessels. The pulmonary artery was provided with four valves, of which two were evidently formed by the division of one valve. The cavities were of large size, and their walls moderately thick. The patient from whom the organ was removed was a man forty-six years of age, who had laboured under chronic phthisis, and latterly displayed symptoms of disease of the kidneys and bladder. He was found to have one kidney entirely disorganized by strumous pyelitis, and the corresponding ureter was obliterated. An abscess existed in the prostate and the bladder was diseased. The lungs were extremely diseased, and there was considerable ulceration of the mucous membrane of the larynx. The structure of the supra-renal capsule in connection with the diseased kidney was entirely destroyed, being converted into fibrous tissue. There had not been any bronzing of the surface.

Pr. Peacock exhibited the specimens to point out an error into which the late Dr. Clendinning had fallen in reference to the state of the heart in phthisis. Dr. Clendining concluded from his observations, that the organ, contrary to which obtains with the rest of the body, becomes hypertrophied in phthisis. This is not, however, strictly correct. The heart, in a case of pure uncomplicated phthisis, is uniformly found to be of less weight than natural. In cases, however, of phthisis of long duration, and especially when complicated with bronchitis, the organ is often found to weigh above the natural standard.

Dr. Peacock, *17th of February*, 1863.

14. *Fibrinous concretion of a globular form, and of about one inch in diameter, lying "loose" within the left auricle of the heart. Induration of the supra-renal capsules. Fibrinous block in the kidneys.*

The preparation was removed from the body of a woman, E. M., æt. 43, who, having for six weeks complained of dyspnœa and anasarca of the legs, was admitted into St. George's Hospital with these symptoms, and also a feeble and irregular action of the heart. On examination by the stethoscope "mucous râles" were heard all over the chest, and ægophony on the right side. Moreover, a loud bruit was audible at the apex of the heart; heard distinctly with the systole, and doubtfully with the diastole. The patient much improved after being cupped on the chest, and under the use of diuretics. No albumen was found in the urine. After a time, the breathing became more hurried, but no pain was felt. Dyspnœa increased until death occurred, about five weeks after admission.

On *post-mortem examination*, the lungs were found to be œdematous, and their lower parts hepatized, and much fluid was found in the right pleural cavity. The heart was larger than ordinary, and its walls thinned. The mitral valve was reduced by thickening, and by calcareous deposit in its elements to a small buttonhole-shaped aperture. The inner surface of the left auricle had several patches of fibrin attached to it; and lying "loose" within its cavity was a large spherical mass or concretion of fibrin, weighing rather more than four drachms (*See* Plate I., Fig. 2), perfectly solid throughout, and uniformly granulated in a remarkable manner on its surface, except in two places, where marks, like indentations, existed. This globular mass had also attached to it at one spot a small amount of shreddy loose fibrin. Section through this singular body showed its interior to be mainly composed of friable fibrin; but at one part, its circumference, and a certain amount also of its inner substance was formed of distinctly laminated and darker coloured fibrin.* The kidneys were found to be large and very congested, and to contain "fibrinous blocks." The supra-renal capsules were of ordinary size, but so firm in consistence as to be of almost cartilaginous hardness.

Remarks.—The peculiar rounded body, above described and figured in the Plate, was no doubt produced by the constant and free agitation of

* The specimen exists as a preparation in the St. George's Hospital Pathological Museum, Series vi.

a fragment of fibrinous coagulum separated from some part of the endocardium, and uniformly increased by fresh material at its circumference precipitated from the surrounding blood-stream. The globular form having once been assumed, its continuance during the further increase of the concretion would easily be ensured. It is not a little remarkable that this "loose body" within the auricle did not occasion death long before that event occurred, by hindering the flow of blood through the mitral opening; and this is especially so, when we consider the exceeding diminution which that orifice had undergone, owing to disease of the valve elements. Dr. John W. Ogle, *3rd of March*, 1863.

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15. *Large mass of decolorized fibrinous coagulum filling the right ventricle, and passing up considerably into the pulmonary artery.*

This mass of coagulum received distinct impressions from the prominence on the inner surface of the heart, and from the valve at the foot of the vessel. The surface was bloody, but when cut into, its substance was of a light yellow colour, but not softened or in any way disintegrated. A certain amount of firmish blood-clot existed in all the heart's cavities, but this was much less firm and solid than the coagulum in the right ventricle. The heart was natural in structure, &c. The lungs contained scrofulous deposit and vomicæ, and indications of old-standing pleurisy were found. The kidneys were very diseased, granular, and of a light yellow colour, and occupied by cysts; other organs natural.

The specimen was removed from the body of a man, T. A. H., æt. 46, who was admitted into St. George's Hospital, having been ill with weakness, cough, and expectoration for four months, ever since he had an attack of fever and bilious vomiting. The stethoscope indicated the existence of phthisis pulmonalis. Albumen, renal casts, and pus globules, were met with in the urine. He sank, and died four days after admission.

In connection with this specimen Dr. Ogle also exhibited the drawing of a remarkable case of fibrinous coagulum filling up the pulmonary artery, its two main bifurcations, and also a large number of its subdivisions to the fourth and fifth degree (Woodcut 28). At the thicker or corner parts of the fibrinous mould the indentations of the pulmonary valves were very distinctly seen. The specimen from which the drawing was made existed in St. George's Hospital Pathological Museum.*

Dr. John W. Ogle, *3rd of March*, 1863.

* Series vi. No. 194.

Woodcut 28.

16. *Laceration, without external injury, of the wall of the left auricle of the heart. Fibrinous concretion undergoing softening in the same auricle.*

The lining membrane, and also the muscular walls, were ruptured through their entire thickness; but the pericardial covering remained entire. The rent was about one and a-quarter inch in length, horizontal in direction, and extended just above the auriculo-ventricular orifice; its edges were even, abrupt, and, when recent, were red in colour. The muscular fibres between the edges of the rent were covered by dark clotted blood. Excepting a slight thickening and yellowness of one part of the endocardium of the auricle, this structure was natural. There were several, evidently old-standing, coagula adherent to the walls of the left auricle, undergoing softening. The heart's valves were natural. The pericardial sac contained a quantity of turbid fluid, and there was a white patch on the surface of the heart. The lungs were œdematous.

The specimen was removed from the body of a child, C. H., æt. 12 years, who was admitted into St. George's Hospital on account of dropsy, and suppression of urine, with epileptiform convulsions, following scarlet-fever. When admitted, a strong systolic bruit was heard in the cardiac region. Dyspnœa was a very prominent symptom, and the heart's action became very turbulent. The cardiac bruit, however, ceased before death, which occurred after symptoms of collapse.*

Dr. John W. Ogle, *3rd of March*, 1863.

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17. *Obstructive disease of the mitral valve.*

The gentleman (about 30 years of age) from whom this heart was taken, called on me when passing through London, on his way to Paris, for change of air. He fancied he was suffering from indigestion. I found a distinct diastolic mitral murmur; and, as he had suffered from a severe attack of angina a few days before I saw him, I recommended him to return home. I learnt from him that, eighteen months ago, he thought he had disease of the heart, but was assured that he had not. He had then suffered from great pain in the side and shortness of breath. Of late, however, he had enjoyed good health, until shortly before I saw him. The week after he returned home, he had another severe attack of difficulty of breathing and of pain in the side, and was

* The specimen will be seen in the St. George's Hospital Pathological Museum, as preparation 214, series vi.

carried off during the attack in the course of a few hours. I had, before his death, written to his medical attendant in the country, to the effect that I had no doubt of there being present in the heart obstructive mitral valvular disease. I mention this fact, because I am convinced, notwithstanding the generally received statement to the contrary, that diastolic mitral murmur is a positive and not an uncommon fact. The nature of the disease found in the mitral valve, which is of a somewhat peculiar character, is described in the following report by Drs. Peacock and Bristowe. Dr. MARKHAM, *17th of March*, 1863.

Report on Dr. Markham's case.—In Dr. Markham's case of mitral-valve-disease we recognized:—

1. Great thickening of a considerable portion of the mitral valve itself, dependent on the presence of a tough, somewhat glistening, fibroid deposit.

2. Continuous with the upper part of this a quantity of dense, but somewhat friable, and slightly reddish-coloured material.

And, 3rd. In the lower part of this latter material, a small horizontal cavity, with a linear vertical section, the margins of which had a pale-yellowish tint, and were somewhat pulpy.

Under the microscope, the *fibroid substance*, just mentioned, was found to consist of a coarse fibroid material, which readily swelled up and became transparent under the influence of acetic acid; and then displayed in the interstices between the fibres a moderate number of elongated, but somewhat indistinct, nuclear bodies. The substance appeared to be as nearly as possible identical with that of fibroid deposits found not uncommonly within, and on the surface of, other organs. The more *friable material* presented in some places a delicate, but irregular fibrillated texture, closely resembling that of coagulated blood, in others an indistinct gelatinous-looking network, such as is often observed in old clots, or in some forms of inflammatory exudation. It was studded irregularly, but nowhere thickly, with minute granules and oil-globules. Acetic acid acted on it readily, but brought no traces of nuclei into view. The microscopic structure of the material was quite compatible with its origin in mere coagulation of blood. The margins of the *small cavity*, and the pulp scraped from its inner surface consisted apparently of exactly the same elements as the material just described. But the tissues were more broken down, and were intermixed with a great abundance of granular matter, and of oil-globules of all sizes.

The opinion at which we have arrived is, that the disease consisted originally of some fibroid degeneration, or change, in the mitral valve itself; that subsequently, from some cause or other (possibly, in the first instance, roughness of surface produced by disintegration), the fibrine of the blood deposited itself on the upper aspect of the diseased portion of the valve, and slowly accumulated there; and that the small cavity, like cavities so often found in old clots in various situations, was simply the result of the degeneration and breaking down of a small portion of the coagulum in which it was found.

Dr. Peacock and Dr. Bristowe, *5th of May*, 1863.

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18. *Laceration of the internal carotid artery internal to the carotid canal.*

J. E., æt. 40, was admitted into St. George's Hospital, under the care of Mr. Pollock, on the fifteenth of December, 1862, about twelve, midday. The man had been found insensible, near a locomotive engine, and it was supposed that he had been in some way struck by some portion of the machinery. He was perfectly unconscious when admitted, and was breathing stertorously. A wound was observed over the left orbit, involving the greater portion of the upper eyelid. The lower lid and cheek were much bruised. The contents of the orbit had been torn out and lay on the cheek. The roof of the orbit was found to be entirely smashed. Brain was oozing from the wound. Hæmorrhage, to an alarming extent, of arterial blood continued until pressure was applied to the left common carotid artery, and recurred whenever pressure was discontinued. He died about three hours after admission.

Post-mortem examination. — *External appearances.*—There was a considerable wound occupying the position of the lids and eye on the left side.

Cranium.—The whole cavity of the arachnoid was occupied by a thin layer of coagulated blood; some blood also was seen underneath the arachnoid. When the brain was raised, great cavities containing blood and pulpy cerebral matter were seen in the anterior and middle lobes of the left side at their lower aspect.

The left upper orbital plate was broken up into small fragments, as also was the base of the skull, reaching from the orbit to the petrous bone. An irregular hole was thus formed about two inches and a-half long and one inch broad. The anterior and middle fossæ of the left side were thus laid open from the front.

About a quarter of an inch from the commencement of the groove for

the carotid artery, in the sella-turcica, was an irregular laceration in the under and inner part of the artery, occupying about half its circumference.

The fragments of bone lying in and about the lacerated brain were much comminuted and small; and most probably the injury to the artery had been caused by one of these pieces having been thrust backwards from the fracture, which was in the immediate vicinity, and forced between the artery and the bone.

A quantity of coagulum was found in the base of the skull where the brain had been damaged, and a little on the opposite side. The brain was not injured, except in the position of the fracture. There was no fracture of that portion of the bone which supported, and partly protected, the artery, and therefore the injury to the vessel could only be accounted for by a displacement backwards of a moveable portion of the fractured bone. Mr Pollock, *5th of May*, 1863.

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19. *Obstruction and inflammation of the femoral vein resulting from the pressure of a distended sacculus of the urinary bladder.*

J. H., æt. 68, was admitted into the London Fever Hospital, on the 3rd of February, 1863. He was said to have been ill with "fever" for five weeks, and to have been in a very destitute state for some time before. He was brought from Deptford, where typhus had been very prevalent, and his condition on admission, notwithstanding the absence of eruption (accounted for by the duration of the illness) rendered it probable that he was convalescent from an attack of typhus fever. The pulse was 84, and feeble; the tongue was dry and brown at the base; the bowels were costive; the heart's action was very weak, but in other respects the physical signs of the chest were normal; the mind was slightly confused; there was no œdema, and the urine was free from albumen. On the left leg there was an extensive chronic ulcer, with a dirty sloughy surface. The patient was ordered a mixture containing quinine and mineral acid, together with brandy and a generous diet.

During the first few days he progressed favourably; he slept well; the appetite improved; the tongue became moist, and the surface of the ulcer cleaner. On the 13th, however, he was not so well; he had considerable epistaxis, and occasional rigors, in the morning; his cheeks were very flushed; the pulse was 96, and very feeble, and the tongue dryer. The ulcer on the left leg looked clean and healthy, but for the first time the right thigh and leg were noticed to be enormously swollen

—fully twice the size of the other limb. The surface was œdematous, tense, slightly reddened, and somewhat tender. A hard tender cord could be felt in the course of the femoral sheath. In the lower and right side of the abdomen was a tense, very tender, fluctuating swelling, extending from Poupart's ligament for four inches upwards, and laterally from the left extremity of the crest of the pubes to the anterior superior spine of the right ilium. (Woodcut 29.) There was no corresponding

Woodcut 29.

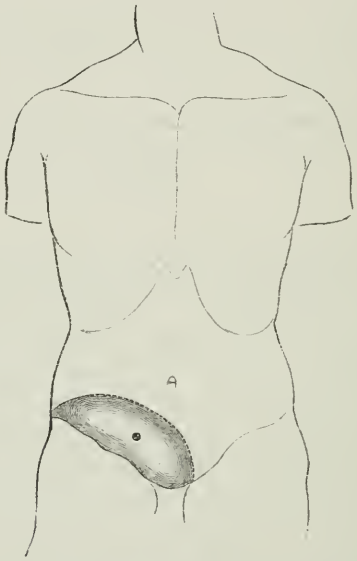

Diagram showing situation of abdominal tumour. The dark spot in the centre of the shaded space represents the site of puncture.

swelling on the left side, while the left leg and the body generally were free from œdema. The abdominal swelling yielded distinct signs of fluid on percussion; its upper margin was convex, and easily defined. There was no tenderness over the spine, or in the lumbar region. The bowels had been opened on the previous day, and the patient had not suffered from diarrhœa, nor from any abdominal symptom since admission. Neither had he complained of any pain or difficulty in micturition; the urine was ascertained to have been passed in considerable quantity; it was of a dark amber colour, and clear; it threw down no deposit on standing, and was free from albumen. The right thigh and leg were ordered to be kept elevated and fomented with a poppy-head lotion; a poultice was

applied to the abdominal swelling; sulphuric ether was added to the former mixture; and a diet, consisting of beef-tea, milk, and two eggs, with twelve ounces of brandy, was prescribed.

On the following day, the swellings both in the abdomen and leg were found to have slightly increased; while the former was more tender. The patient was in a very low state, and the tongue was dry and brown. One pint of urine had been passed in the morning, and twelve ounces immediately before the visit. As death appeared inevitable, unless the swelling was relieved, a puncture was now made with a fine trocar into the abdominal swelling about midway between the pubes and the spine of the ilium (*see* Fig. 29). Twelve ounces of a clear fluid were drawn off. This was ascertained to be urine, and at once the discharge from the canula was stopped, and a catheter was introduced into the bladder, from which thirty-two ounces of urine were drawn off, making fifty-six ounces of urine discharged within half-an-hour. Meanwhile the abdominal tumour had completely disappeared, and the patient experienced great relief. The catheter was tied into the bladder, but was removed during the night by the patient.

After this the patient gradually became lower, but there was no return of the abdominal swelling, and at no time any sickness, or pain, or tenderness of the abdomen. The day after the operation there was considerable restlessness, which was relieved by a few small doses of Liquor Opii Sedativus. The urine was passed regularly in considerable quantity, and was now found to be thick and muddy from the presence of mucus. The right thigh and leg were reduced in size and tension, but still remained much larger than the left. The patient gradually sank, and died at nine A.M., on the 18th of February.

The body was examined at three P.M. on the day of death. No trace of the wound made by the trocar could be found internally, and there was no increased vascularity or sign of inflammation in any part of the peritoneum. On the right side of the bladder, near its fundus, was a sacculated pouch bulging towards the peritoneal cavity not larger than a walnut, but which, when distended, must have produced the abdominal tumour during life. It presented no trace of the puncture. On the left side of the bladder was another hernial protrusion, but not larger than a hazel-nut. The muscular coat of the bladder was thickened. The bladder contained a few ounces of dark turbid urine. The mucous membrane was ulcerated at many places, and of a dark hue. The orifice between the bladder and the larger sacculus was just large enough to admit the point of the finger. On close inspection, the mu-

cous membrane presented an immense number of minute saccular protrusions through the meshes formed by the bands of muscular fibre, in addition to the two large ones already mentioned. The prostate was but slightly enlarged, but there was considerable constriction of the urethra in front of the membranous portion.

The right femoral vein was much enlarged and distended, presenting the form of a rounded cord, whose diameter at the upper part was between nine and ten lines. This enlargement commenced abruptly at the brim of the pelvis, and extended down to the foot. The vessel also presented a nodular dilatation at each place where the main trunk was joined by a large branch. On slitting open the vessel, it was found filled with dark coagulum. Along the upper four inches of the enlargement, the coagulum was firmly adherent to the wall of the vessel, and the portion of the clot in contact with the vessel, and extending inwards for nearly a line, was firm and decolorized. Below this the clot was non-adherent, except at some of the nodular dilatations, above mentioned. The right femoral artery contained a small quantity of fluid blood.

The kidneys were slightly diseased, but the other organs of the body presented no morbid appearance of importance.

Remarks.—The above case presents several features of interest. Distended sacculi of the urinary bladder, as large as a man's head, have not unfrequently been observed, but that such a sacculus should form a unilateral abdominal tumour, extending as far as the spine of the ilium is an occurrence almost, if not quite, unique. That the tumour distinguished during life was due to the distended sacculus, was proved by the urine drawn off by the canula, and by the tumour disappearing when the bladder was emptied by the catheter. The contracted state of the sacculus after death was accounted for by certain bands of muscular fibre being extended over it from the muscular coat of the bladder. But the most extraordinary circumstance in the case was the obstruction and inflammation of the right femoral vein. That the condition of the vein resulted from the pressure of the distended sacculus was indicated by the following facts:—1. The abdominal swelling, and the enlargement of the right lower extremity, with tenderness and hardness along the femoral sheath, appeared suddenly and simultaneously. 2. The great tension and tenderness of the abdominal swelling showed that it was exerting pressure on the surrounding parts. 3. The obstruction of the vein commenced abruptly at the brim of the pelvis, which formed an unyielding body against which the vessel was com-

pressed. 4. After the disappearance of the abdominal tumour, there was a considerable subsidence in the swelling of the leg. It is to be observed that the exploratory puncture made into the abdominal swelling was followed by no bad consequence. The puncture was made solely with the object of throwing light on what at the time was justly regarded as a most obscure case. The unilateral character of the swelling, the enlargement of the corresponding leg, the inflamed condition of the femoral vein, and the circumstance that the patient was passing without any difficulty abundance of clear urine free from albumen or mucus, removed all suspicion that the bladder was the organ primarily at fault. Dr. MURCHISON, *5th of May*, 1863.

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20. *Case of ruptured popliteal aneurism.*

E. L., æt. 29, thin, pale, and cachectic-looking, and a hard spirit-drinker, was admitted into the Westminster Hospital, on the 2nd of December, 1862, with a large, painful, fluctuating swelling in the right ham. The skin over the upper part of it was of a dusky-red colour. A distinct, though feeble, impulse was communicated to the hand placed on it, and a decided bruit was heard over every part; both of which were arrested on making firm pressure on the femoral artery. The circumference of the limb around the tumour was fifteen and a-half inches, that of the corresponding part of the left being only eleven and a-half. A small quantity of fluid occupied the knee-joint. There was no œdema of the foot or ankle, and the temperatures of both feet were alike. The pulsation of the posterior tibial artery, behind the inner malleolus, was less distinct than on the sound side.

History.—The patient's attention was first attracted to the swelling, about eighteen months before admission, from her suffering from cramps in the limb. The tumour was then no larger than a nut; but it had gone on increasing, and there was no period at which it had become suddenly larger. The patient could assign no cause for it.

Treatment.—Flexion of the limb and different methods of compression having failed to arrest the progress of the disease, and the circumference of the limb having increased from fifteen and a-half inches to seventeen and a-half, the femoral artery was tied in the lower part of Scarpa's triangle, on the 16th of December. From this date, to about the middle of February, all pain, impulse, and bruit ceased; but the size, colour, and consistency of the tumour remained nearly the same. Permission having now been given the patient to go out for a short

time in the middle of the day (the limb being encircled by a flannel roller, and the foot suspended in a sling), she returned to the Hospital intoxicated, and from this date a relapse took place; she lost her appetite; her tongue became foul, and her temper irritable; the tumour also became softer, and very tender on pressure. On the 24th, the tumour and the whole leg were hot, painful, and inflamed; the foot œdematous, and the skin over the tumour so thin as to threaten to burst. Under these circumstances I made an incision into the tumour, and gave exit to sixteen ounces of bloody pus, mixed with a few soft dark-coloured coagula. A large wet compress was applied to the wound, and a bandage from the foot to above the knee. Five hours afterwards internal hæmorrhage to a large amount took place, which was arrested only just in time to save the patient's life. On the following day she had sufficiently rallied to permit of amputation of the limb; which, taking all circumstances into consideration, seemed the only remedy calculated to save her. She bore the operation well, had not an unfavourable symptom afterwards, and was discharged from the Hospital cured on the 4th of April.

Examination of the limb.—The sac of the false aneurism, which had afterwards suppurated, extended from the upper part of the popliteal space to about the junction of the middle with the lower third of the leg, and contained a few loose coagula and a little bloody pus. Its walls were constituted by the boundaries of the popliteal space above, and by the condensed and infiltrated skin and gastrocnemius muscle below, between which the cavity existed. On washing this out, the true aneurismal tumour was seen, with the popliteal nerve flattened out over it. The popliteal artery was also somewhat flattened, and apparently enlarged, before it expanded into a fusiform aneurism, from two to three inches in length, and about one and a-half in breadth, open in its whole length towards the cavity of the abscess, and containing a firm solid clot; it was apparently in process of cure. The artery leading to the aneurism was pervious from the point of section, and apparently healthy; the posterior tibial was small; one of the articular arteries was very large.

Mr. Holthouse, *5th of May*, 1863.

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21. *Case of aneurism of the descending aorta, opening into the left bronchus, combined with a consolidated lung.*

Private W. P., æt. 32, was admitted into the Regimental Hospital, Coldstream Guards, on the 7th April, 1863. He had just returned

from six weeks' furlough in the country, where he had been sent for the benefit of his health, on account of a previous attack of bronchitis, for which he was under treatment for forty-four days.

He was suffering much from dyspnœa and spasmodic cough without much expectoration; his muscular condition was tolerably good, and he had no hectic; he slept well, except when occasionally troubled with cough. The secretions were all natural, and appetite good; there was no hereditary predisposition to phthisis, nor record of any previous attack of hæmoptysis.

On examination of the chest, there was extensive evidence of consolidation of the whole of the left lung; throughout which, increased vocal resonance and bronchial breathing were universally audible. There were a few moist râles at the base of the right lung; and about the centre of the left lung, there were all the physical signs of a cavity of some extent.

The pulse was small and quick, and the heart-sounds normal, though weak. He was placed on a generous diet, and ordered mineral acids, with Chloric Ether and Squills in Decoction of Cinchona thrice a-day, and small doses of Morphia at night. Three days after admission the extremities became slightly anasarcous, but the urine, although containing oxalates in abundance, was free from albumen. The breathing also became hurried, and the expectoration slightly tinged with blood. The heart was carefully examined, but no abnormal bruit could be discovered, and the case was looked upon as one of tubercular consolidation, the result of an insidious form of pneumonia.

The man appeared to get gradually weaker, though he complained of no pain; but he was evidently impressed with the idea of a speedy recovery.

On the 16th of April, nine days after admission, while sitting up in bed, he complained of a tight feeling about the chest, and in a minute after, without coughing, a large quantity of arterial blood escaped from his mouth, and he was dead before the nurse could summon a medical officer.

The *post-mortem examination* revealed most extensive and universal adhesions and thickening of the left pleura, and entire consolidation of the left lung. The colour of the lung was greyish, and it had a leathery sort of feel. There was no tubercular deposit. On cutting into its tissue, the bronchial tubes were found quite full of blood; and about the centre of the left bronchus there was a well-defined aperture, about the size of a sixpence, through which a soft fibrinous-looking bloody mass protruded.

This was found to be a portion of the dense fibrinous mass of an aneurismal sac, which had commenced by an opening, of large size, and with well-defined edges, from the descending part of the aorta, being about the size of a large walnut, and formed from the external coat of the vessel. It was almost entirely filled with a very dense fibrinous mass, (with concentric laminæ) which, towards the bronchus, was of a softer character. There was thus a very small space for the entrance of fluid blood, and this, notwithstanding the dense state of the pulmonary tissue, might account for the little positive evidence of any aneurismal disease. The left pulmonary artery was much pressed upon by the tumour. The heart was flabby and soft, and there was considerable serous effusion in the pericardium.

As the association of consolidated lung with aortic aneurism is believed to be rare, it has been considered of sufficient interest to bring under the notice of the Society.

Dr. Farquharson, for Mr. Wyatt, *19th of May*, 1863.

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22. *Pouchy dilatations of digital arteries.*

J. I., æt. 17, living at Plumstead, came under Mr. Sydney Jones's care at St. Thomas's Hospital, in January, 1863. He affirmed that, twelve months previously, his left ring-finger was exactly similar to the opposite one; that the former, about ten months ago, presented a swelling just below the metacarpo-phalangeal joint; and that this swelling, at first involving the outer, and subsequently the inner, side of the finger, and attracting notice by the uneasiness caused by its pulsations, gradually extended downwards towards the finger-tip. Between three and four months ago, he received on the outer side of the finger, near to the second phalangeal joint, some slight wound; from this there was troublesome hæmorrhage, which was subsequently arrested by pressure, and in the course of about ten days the wound healed. About a fortnight after this he received, at the same spot, a second injury: this was followed by hæmorrhage, which recurred at intervals, and in increasing quantities, until his admission into the Hospital.

When admitted, the boy was very feeble, and much blanched; so that it was thought not advisable to attempt any means having for their object the preservation of the finger. The latter had about twice its normal circumference; it was spongy; and near the second phalangeal joint, on the outer side, there was a circular opening, about a line and a-half in diameter, and having a sloughy-looking margin. From this

opening arterial blood spurted, as from an ordinary radial, whenever pressure was removed from the artery in the arm. The finger was accordingly removed, and with it the head of the metacarpal bone. The arteries were very large; one vessel was ligatured rather high up in the palm of the hand, in order to get beyond a point of diseased structure. The wound healed in the course of a fortnight. I saw him a few days since, and could detect no return of the disease.

On dissection (which was effected under water) of the finger, both digital arteries presented a number of pouchy dilatations reaching from the metacarpo-phalangeal joint to the proximal end of the ungual phalanx. These dilatations varied in size; some were small, constituting mere depressions in the arterial coats; others were large enough to hold a pea. On examination of the part whence the hæmorrhage had occurred, there was found an elongated pouch, having the calibre of an ordinary ulnar artery, and perforated at its extremity by an aperture capable of admitting a director. The digital arteries above, and at the point of origin of these dilatations, had their coats much thinned, but otherwise did not appear unhealthy. They were not subjected to microscopical examination, but to the naked eye showed no trace of atheroma. The veins were large, but otherwise normal. The nerves were unusually large. Mr. Sydney Jones, *19th of May*, 1863.

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23. *Fatal anæmia, associated with intense fatty degeneration of the heart.*

The patient was a man, 44 years of age, who had been a butler. For the last two years he had been out of place, ill, and in extreme poverty. At the beginning of this period he had no symptoms but garrulity and an oddness of manner. Latterly, his complexion had become remarkably pallid. Rather more than a year before his admission the sight began to fail in the right eye, as it afterwards appeared, in consequence of opacity of the cornea. This led to his being blistered on the back of the neck. In the neighbourhood of the sore thus produced boils began to appear, and subsequently came in different parts of the body, so that at one time he had as many as twenty at once, some of which were very large.

When admitted he was excessively blanched and emaciated. A persistent murmur was heard on the sternum, level with the nipples, and for two inches lower. His appearance was such as to suggest splenic disease, but he had no abdominal tumour that could be detected. Some deep pricks were made in his arm, but no blood could be obtained. He

had ordinary diet, port wine, and five grains of citrate of iron three times a-day. The latter was afterwards changed for the syrup of the iodide.

He did not improve, although he continually said that he was better. At the end of three weeks he was more sallow and bloodless. He seemed to have shrunk. He could not now leave his bed from weakness, and he talked incoherently. He grew still weaker; his remarks became more and more silly, and he soon died without further change.

The body was examined forty-five hours after death. The skin was generally of a sallow tinge; the lips were without colour, and the right cornea was opaque.

The dura mater was thickened; the Pacchionian bodies were large, numerous, and widely scattered. The arachnoid was thickened, and in the space beneath was much fluid, so that the membrane was, at the back of the hemispheres, raised quite off the convolutions. There was some excess of fluid in the ventricles; and the brain-substance was generally pale and watery, though here and there marbled with minute patches of pink vascularity which affected alike the white and grey matter. The spinal cord was, like the brain, pale and sodden in appearance, and in the space outside the dura mater was a little serous fluid.

Both pleuræ contained a small quantity of serous fluid, but the lungs were natural.

The heart was larger than usual. The left ventricle was quite uncontracted, and contained a very minute black clot. The right ventricle was partly contracted, and contained a stringy fibrinous clot of small size. The mitral and tricuspid valves were very slightly roughened. The muscular substance of the heart was of a most unusual colour, much like that of a very fatty liver. Beside the general fawn tint of the muscle, were interspersed many small specks of a lighter colour like bran. On the surface was a layer of fat of about the ordinary amount, which was quite distinct from the muscular substance. Examined with the microscope the most extreme condition of fatty degeneration was seen. Scarcely a striated fibre could be detected. The fibres were mere cylinders of aggregated fat-globules. It would scarcely have been possible with the microscope to have recognized the tissue as muscular.

The spleen was natural; it only weighed four ounces. The liver was rather clay-coloured, and the lobules appeared enlarged, as is sometimes the case with incipient cirrhosis. The kidneys, supra-renal bodies, pancreas, the thoracic duct, and the great sympathetic nerve were all examined, and found natural. The same statement applies to the stomach, and the whole length of the alimentary canal.

The blood was generally fluid, and of a very watery appearance. Some was found in the aorta as well as in the veins. The tissues in

Woodcut 30.

contact with it were not stained. The microscope displayed nothing unusual. The white corpuscles were not more than normally abundant.

In this case the first question that will suggest itself is as to the connection between the anæmia and the fatty degeneration of the heart. These were the only pathological appearances found, except the state of the brain, which was clearly secondary to them. It is well known that slow starvation, and diseases which are analogous to it in their action, have a tendency to cause general fatty degeneration of the muscular and glandular organs. In a body, recently examined at St. George's, where death had been solely produced by the wasting effect of a large, long-neglected abscess, the heart, the liver, the kidneys, and the voluntary muscles were all, as was apparent to the eye, and proved by the microscope, in an extreme state of fatty degeneration. The body was extremely emaciated. In the case under consideration, if the anæmia,

the result of insufficient food, be the primary change, and the alteration of the muscular tissue of the heart, a consequence, the question will occur, "Why was no other muscle affected in the same way?" But, notwithstanding this difficulty, it is impossible to suppose that the anæmia was in any way the consequence of the cardiac degeneration. Fatty change in the heart proceeds to its fatal issue in syncope or rupture without the production of any such symptoms as were observed here. It may be, as was suggested by Dr. Barclay, under whose care the case was, that the heart is more prone to fatty change than the other organs, and suffers first. A long time may be required before the other organs are necessarily affected in the same manner.

This case bears a great resemblance to one recorded by Dr. Combe in the Transactions of the Medico-Chirurgical Society, Edinburgh, which he regards as a case of anæmia *sui generis*. The patient was a man forty-seven years of age. The marked signs of anæmia, which were the first indication of illness, are graphically described. He continued to decline in health, and latterly became œdematous. The immediate cause of death was hydrothorax. He died about nine months after the first symptoms were observed. At the *post-mortem* examination the bloodless state of all the organs was striking, even more so than in the case before the Society. The state of the heart is minutely described; and as clear a description of fatty degeneration is given as could have been expected forty years ago. "The heart when cut into was of a pale colour, and did not tinge linen when rubbed upon it; it appeared like flesh macerated many days in water." The only other morbid appearances were some plates of bone in the dura mater, and some serous fluid in the pleural cavity.

Both cases may probably be regarded as anæmia, with consequent fatty degeneration of the heart.

Dr. Dickinson, *19th of May*, 1863.

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24. *Case of fatty degeneration of the heart in a young woman, aged 28 years. Sudden death.*

S. M., æt. 28, an enormously stout woman, came under Dr. Harley's care at University College Hospital on the 14th of April. She was one of ten children, six of whom are dead—four living. Her father is also dead, her mother still alive; none of her family have died suddenly.*

* The history of the patient was chiefly obtained from her friends after her death.

The patient has been married four years, has no family, and for the last six months has been in a very desponding state of mind in consequence of the bad conduct of her husband. She is subject to short spasmodic fits of want of breath, especially when out walking; and when these fits come on she is compelled to stand still until they are over. She occasionally vomits her food. She has a florid, puffy appearance, and says that she feels very "nervous and debilitated." She is incapable of much exertion in consequence of frequently feeling as if her whole strength suddenly left her. This feeling, however, soon passes off, and she is then as well as before the attack. She does not complain of palpitation, but of the weakness and spasmodic loss of breath. She says she at times actually gasps for want of breath.

A mixture, containing iron and quassia, was prescribed. She returned to the Hospital on the 21st of April, saying that she felt no better. The tonic was changed to Gentian and Sulphuric Acid. Pil. Rhei. c. Hyd. was also prescribed, as she complained of pain between the shoulders, and symptoms of disordered liver. From this time she improved rapidly, and expressed herself as feeling much better, until the 28th, when suddenly, while attending to her usual household duties, she was seized with loss of power and great dyspnœa. The fit lasted a short time, and then passed off. It soon returned, and again passed off. It returned, however, a third time, and she fell back in her chair and expired.

At Dr. Harley's request the body was examined by Dr. Embling, and the following is that gentleman's report:—

Post-mortem examination, three days after death.—Woman enormously fat. Fat an inch thick over the abdominal muscles. The neck much discoloured. The large vessels evidently distended. Body running rapidly to decomposition.

Brain normal in appearance and consistence; if anything rather paler than usual; membranes separated freely; no signs of injected or congested blood-vessels; small amount of fluid under arachnoid; choroid plexus contained very little blood. *Lungs* healthy; a few traces of old adhesions in the pleuræ. *Stomach* healthy; contained some digested food. Towards pylorus there were a few traces of irritation of the mucous membrane. *Liver* healthy, but gorged with black blood. *Gall-bladder* healthy, filled and distended. *Spleen* somewhat atrophied; pancreas healthy. *Intestines*, large and small, perfectly healthy.

Kidneys hypertrophied, but healthy in structure and appearance. Ureters normal. *Heart* hypertrophied; muscular substance soft, pale,

and flabby. Cavities contained black liquid blood. A layer of fat entirely enveloped the heart.

Microscopic examination of the tissue of the heart.—The transverse striæ of the fibres have almost entirely disappeared, and their place is occupied by minute oil-globules. These are in great numbers, and arranged in rows with much regularity.

Dr. George Harley, *19th of May*, 1863.

IV.—DISEASES, ETC., OF THE ORGANS OF DIGESTION.

I. PHARYNX, ŒSOPHAGUS, STOMACH, AND INTESTINES.

1. *Case of diaphragmatic hernia.*

J. L., æt. 50, was admitted into King's Ward, St. Thomas's Hospital, on the 17th of May, 1862.

He had been ill seven days, and was reported to have been drinking, and at the commencement of his illness had something of the nature of a fit; but when admitted into the Hospital he laboured under the usual symptoms of typhus. He was then much prostrated, though able to walk to his bed with assistance. He was directed to take the citrate of potash mixture.

He was seen by Dr. Peacock on the 19th, and the following notes were then taken. He is in a semi-comatose condition, but is capable of being aroused to answer questions; his expression of countenance is very oppressed; the pupils are contracted, the tongue dry and brown, and there is considerable tremor of the extremities. The skin of the abdomen and thorax is covered by a copious eruption which consists partly of distinct purple spots, which do not fade on pressure and are not elevated; and partly of an ill-defined purple mottling. The pulse is 120, and very feeble; the skin moderately warm and dry. The abdomen is not tumid or tender, but the bowels have been acted upon four times in the last twenty-four hours, and the stools are passed unconsciously, and are thin, dark, and very offensive. He passes water freely. He has a frequent cough, and expectorates a large quantity of sputum which is somewhat viscid, containing small and large air-cells, and is partly of a light russet colour and partly bloody. There is entire dulness on percussion in the left dorsal and lateral regions, and loud bronchial respiration and cough resonance are heard to the left of the spine.

There is also some deficiency of the resonance on percussion in the right dorsal region, and large and small crepitation are there heard. He was directed to take the Carbonate of Ammonia with Tincture and Decoction of Bark, and half-an-ounce of Brandy, alternately every three hours, and to have a blister applied between the shoulders.

From this time he became gradually more prostrated, and died comatose on the 21st,—the eleventh day from seizure.

It was subsequently ascertained that he had resided in the house from which he was removed to the Hospital for two years and a-half, and during that time had been extremely intemperate in his habits. His landlady said that some time before he came to reside with her—she did not know how long—he had been crushed between the buffers of two railway carriages or engines, and had been seriously injured, and was under treatment in one of the hospitals for a considerable time in consequence. He had ever afterwards been subject to pain in the left side of the abdomen, and to shortness of breath, cough, and expectoration. He had, however, continued to follow his occupation of a porter in a warehouse up to the time of his seizure.

The *post-mortem* examination took place on the 22nd.

The body still displayed the remains of livid spots in all parts of the trunk, with large ecchymoses posteriorly; it was well provided with fat.

The dura mater separated readily from the calvaria. The surface of the brain displayed considerable sub-arachnoid effusion elevating the membrane above the level of the convolutions. The arachnoid membrane was somewhat opaque, and the Pacchionian bodies were larger than usual. The convolutions were widely separated, and the vessels of the pia mater much congested. A considerable quantity of slightly opaque fluid was contained in the lateral ventricles, and a large effusion of serum was found at the base. The substance of the brain was tolerably firm, and on section the red dots were more numerous than usual. The basilar artery was dilated, and its coats were thickened, but not otherwise diseased. The encephalon weighed forty-seven and a-half ounces.

On the right side of the chest the pleuræ were slightly adherent, and the posterior part of the right lung was much engorged, and broke down readily on pressure. The bronchial tubes contained a considerable quantity of spumous fluid, but the mucous membrane was not materially congested and retained its natural transparency.

A large portion of the viscera of the abdomen were found to be lying in the left pleural cavity. The lower portion of the cavity was

occupied by the stomach and spleen; the latter was of large size and much softened. In front of the stomach lay a large loop of the transverse colon, and nearly the whole of the small intestines were situated in the upper part of the cavity (*See* Plate). The viscera were found to have escaped from the abdominal cavity, through an aperture in the left side of the tendinous portion of the diaphragm, which was sufficiently large to admit the passage of the hand. The only portions of the alimentary canal which were not in the pleural cavity were the lower part of the ileum, the cæcum and ascending colon, and the descending colon and sigmoid flexure. The lower portion of the ileum passed obliquely across the abdominal cavity from the aperture in the diaphragm to reach the cæcum, the ascending colon went thence to the aperture, and the descending colon passed from that point directly to the sigmoid flexure. The stomach and transverse colon were firmly adherent to the diaphragm near the opening on the thoracic surface, and the ileum and colon were similarly attached on the abdominal surface. The stomach was also united by strong adhesions to the parietes of the thorax.

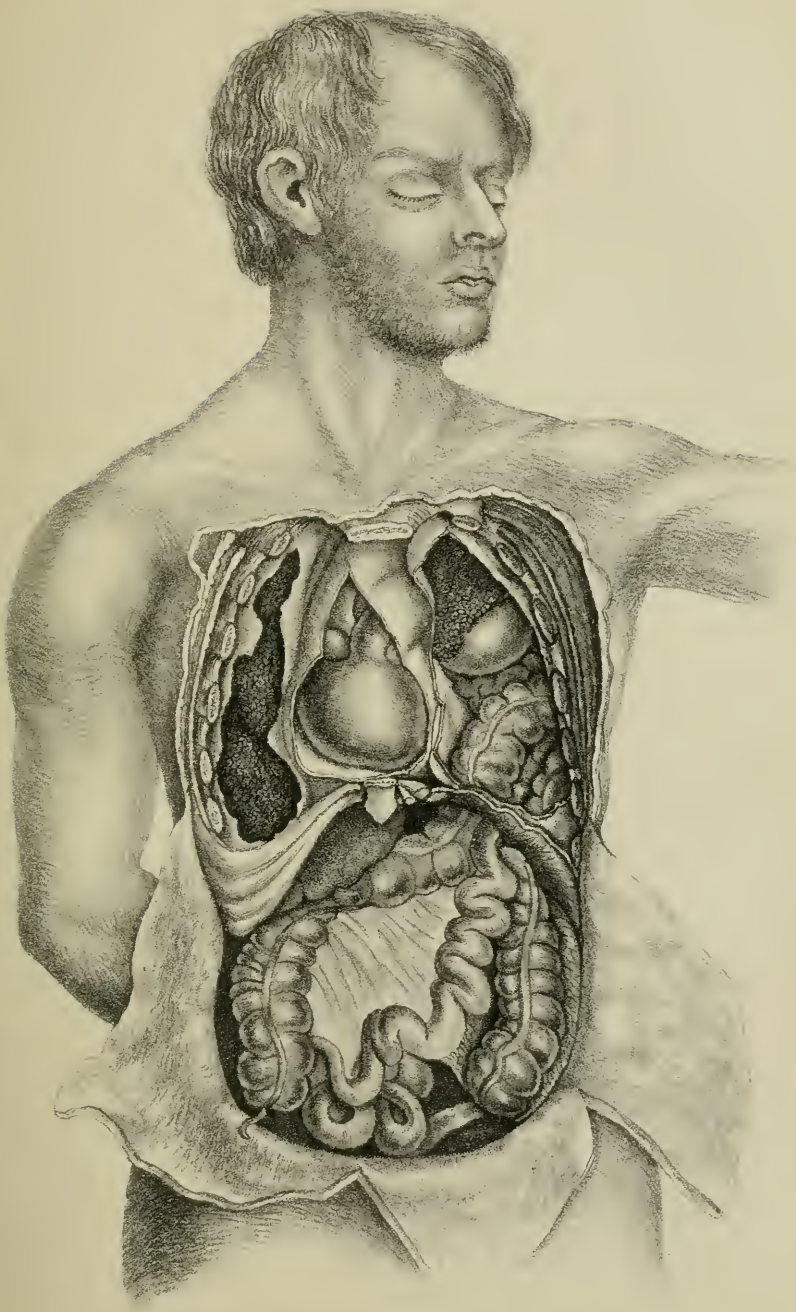
The left lung was much compressed, so as to be reduced to a very small size, and was displaced to the upper and posterior part of the cavity, and bound down by firm fibro-cartilaginous adhesions to the mediastinum and to the ribs. The heart was somewhat displaced to the right, lying behind the lower part of the sternum. There were some adhesions between the lung and pericardium. The heart was large, and its walls flaccid. The ascending aorta was considerably dilated. The blood in the cavities of the heart and throughout the body was fluid and of a very dark colour.

The liver occupied its natural position, and was hard and coarse in texture, and on section was somewhat greasy-looking and congested. The kidneys were in their proper situations. The small intestines, cæcum, and colon were free from all appearances of disease, and the mesenteric glands were not enlarged.

Remarks.—At the time this patient was first seen it was obvious that he laboured under typhus, and from the difficulty of breathing and cough, and the peculiar character of the expectoration, it was inferred that there was active inflammation of the lung. On examining the chest the resonance on percussion was found to be entirely dull on the left side over a large space, and bronchial respiration was heard at the posterior and upper part of the side, and crepitation was detected in the

DESCRIPTION OF PLATE IV.

This Plate illustrates Dr. Peacock's Case of Diaphragmatic Hernia, p. 148.



W. West lith.

lower and posterior part of the right side. It was, therefore, supposed that there was extensive pneumonia or pleuropneumonia of the left lung and commencing inflammation in the right. It will be seen that these inferences were not entirely correct. The recent inflammation was limited to the base of the right lung, and the consolidation in the left lung was the result of the compression of that organ by the abdominal viscera which had escaped into the pleural cavity. The protruded viscera produced the dulness detected in the anterior and lateral parts of the left side.

2. The cases of diaphragmatic or phrenic hernia which are on record may be divided into two classes, *the true and false*. In the former, the abdominal viscera are protruded through one or other of the various apertures which penetrate the diaphragm, and thus they are found to be enclosed in sacs formed by the peritoneum, and covered by another envelope derived from the pleura. Of this description a small number of cases only are on record. One instance of the kind described by Schoberus* is quoted by Morgagni, in which the stomach, duodenum, jejunum and part of the ileum and omentum passed through the aperture which transmits the œsophagus. Morgagni also refers to a case published by Platner,† in which the protrusion took place through the space by which one of the intercostal nerves penetrates the diaphragm; a case probably similar is described by Mr. Saint Andre in the Philosophical Transactions;‡ and a third is quoted from Quarin by Besnier§ in his recent work.

Morgagni and Senac pointed out that there exist spaces on each side of the zyphoid cartilage, in which the muscular structure of the diaphragm is wanting and there are apertures occupied only by cellular tissue; and the former writer supposed that herniæ might occur in these situations. This supposition is confirmed by a case published by Bignardi,‖ and by one related by Sir Astley Cooper¶ which occurred in the practice of Mr. Bowles of Bristol.

In the spurious form of phrenic hernia the protrusion takes place through apertures existing in the diaphragm, either from defective formation of that septum or in consequence of injuries sustained in after life. In this form of hernia the viscera are not enclosed in a sac, but pass with their natural connections from the abdominal into the

* Quoted from the Eph. Nat. Cur., Book iv. Sect. 54, Alexander's translation, vol. iii. p. 210. † *Ibid.*, p. 206. ‡ Vol. xxx. No. 352.

§ Des Etranglements internes de l'intestines. Paris, 1860, p. 255.

‖ Sull'Ernia diaframmatica Memoria. Modena, 1827.

¶ On Hernia, by Key. 2nd Ed., 1827, p. 69.

thoracic cavity. By far the largest number of cases of phrenic hernia are of this description, and have been found in infants who have only survived for a short period. Such are the cases described by Dr. Fothergill * and Dr. Macaulay,† and the instance recorded in the Pathological Transactions by Dr. Hillier,‡ and two specimens of the kind are contained in the Museum of St. Thomas's Hospital.§ The late Dr. John Reid,‖ however, showed that the cases in which the defect is congenital do not all terminate at an early period of life, but that several instances are on record, in which it may be inferred that the aperture in the diaphragm resulted from malformation, and in which the patients nevertheless survived to adult or even to middle or advanced age.

Dr. Bowditch has published a case in which this defect was found in a boy of seventeen, who died from a fracture of the spine.¶

In Dr. Monro's** work on the Morbid Anatomy of the Gullet, Stomach, and Intestines, a case is related which occurred to Dr. Patterson of Ayr, in a female twenty-two years of age. Riverius†† relates a case in a man of twenty-four; Sir Astley Cooper,‡‡ one in a female of twenty-eight; Petit,§§ one in a man of forty; Forlivesi,‖‖ one in a man of forty-two; and Sir Astley Cooper¶¶ quotes from Dr. Leacock the report of a case which occurred in a man forty-nine years of age. The gentleman whose case is recorded by M. Chauvet,*** of Toulon, was a Lieutenant-Colonel who had seen active service, and may therefore be inferred to have been at least of middle age; and Vetters'††† case is said to have occurred in an old man.

In the cases of hernia which result from accident the diaphragm is either found to have been perforated by stabs with swords or other sharp-pointed instruments, lacerated by the ends of broken ribs, or ruptured by violence without material injury of the adjacent organs. In most of the cases of this kind the injuries prove rapidly fatal, but in some the patients survive for a short time, and yet in others the

* Works by Lettsom, 1784, p. 161, in a letter to Dr. Mead.

† Med. Obs. and Eng. by a Society of Phys. in London, vol. i., 4th Edit., 1776, pp. 26 and 31. ‡ Vol. xii., 1860-61, p. 115. § Section L L, Nos. 81 and 82.

‖ Ed. Med. and Surg. Journ., vol. liii., 1840, p. 104.

¶ Treatise on Diaphragmatic Hernia. Buffalo, 1853.

** Edinburgh, 1811, p 540.

†† Obs. Med. et cur. centuria iv.; Obs. lxxvii.; Opera Med. Univ. Lugd., 1679.

‡‡ *Op. cit.*, pp. 69. §§ Traité des Malad. Chir., T. ii., 1790, p. 229.

‖‖ Bulletino della Scienze Mediche, 1842, quoted in Gaz. Med. de Paris, 2me serie, T. xime, année, 1843, p. 192.

¶¶ *Op. cit.*, pp. 73.

*** Mem. de l'Acad. Royale des Sc., année, 1729. Paris, 1731, p. 11, Obs. 2.

††† Aphorismen aus der Pathologischen Anatomie. Wien, 1803, § 158, p. 144.

recovery is complete and the patient dies from an entirely independent affection, or from secondary effect of the injury. A case is related by Ambrose Paré,* in which the patient died eight months after a penetrating wound of the diaphragm. Mr. Bayle† has recorded an instance in which the patient was wounded eleven months before. In the case related by Dr. Reid,‡ the injury had been inflicted fifteen months before, and in that detailed by Mr. Greetham,§ four years had elapsed since the receipt of the wound.

When the perforation of the diaphragm is the result of laceration, either by broken ribs or otherwise, death often rapidly ensues, partly from such accidents generally resulting from falls which give rise to other serious injuries. In the second part of the paper by Dr. Reid, two cases of this kind are related.‖ One of them was that a railway labourer who was crushed by a fall of earth and died shortly after, under the care of Mr. Fergusson, in the Edinburgh Infirmary. The ribs were found to have been broken and the diaphragm torn, and the stomach, spleen, and transverse colon had penetrated through the aperture into the left pleural sac. The other case, communicated by Dr. Traill, was that of a slater, who fell from the top of a house and pitched with his abdomen on the curb-stone. His leg was fractured and required amputation and he died shortly after. On examination, the diaphragm was found to have been ruptured, and the stomach and a portion of the intestines had passed into the thorax. Mr. Wainwright¶ has recorded the case of a man who was thrown from the top of a coach and died in two days, and was found to have sustained a laceration of the diaphragm, without however any fracture of the ribs. In the same paper there is a notice of case examined by Mr. Travers, and of which the preparation is now in the Museum of St. Thomas's Hospital.** The patient fell a height of thirty-six feet from the mast of a ship to the deck and died in a few hours, having sustained fracture of some of the ribs, as well as a laceration of the diaphragm allowing of the displacement of the abdominal viscera. Sir Astley Cooper†† quotes the history of a case of laceration of the diaphragm and hernia of the

* Pareus, Lib. ix. cap. 30, quoted in Sepulchretum Boneti, Lib. iv., Sect. iii.; De Vulneribus, § 8. See also Dr. Reid's Paper, Ed. Med. and Surg. Journal, 1840, vol. liii., for this and the three following cases.

† Ed. Med. and Surg. Journal, vol. viii., 1812, p. 42.

‡ The question chiefly discussed by Dr. Reid is the dependence of the aperture in the diaphragm on the stab the patient had received, and he clearly establishes that point.

§ Lond. Med. Gaz., vol. x., p. 43.

‖ Vol. liv.

¶ Med.-Chir. Trans., vol. vi., 1819, p. 374.

** Section R, No. 105. The rupture in this case is situated on the right side.

†† *Op. cit.*, p. 71.

stomach and duodenum, described by Mr. James Simpson, in which the patient survived five days. Mr. Cæsar Hawkins * has related, in the Pathological Transactions, the case of a patient who had a laceration of the diaphragm and fracture of both arms and other injuries, and survived thirteen weeks. Mr. Taylor† has published, in the Guy's Hospital Reports, the case of a man who, after fracture of the ribs and rupture of the diaphragm, lived nine months. Dr. MacFadyen,‡ of Glasgow, has recorded the case of a slater, who, in a fall from a great height, sustained a rupture of the diaphragm; recovered from the injury, and then died, after a short illness, at an interval of twelve months. Dr. A. T. Thomson§ has related a very similar case in which the patient survived for the same period, but in which some of the ribs were broken. Dr. Clarke‖ has related a case in which the patient, after fracture of the ribs and laceration of the diaphragm, lived two years.

Still more remarkable are the cases related by M. Derrecagaix and Mr. Morgan.

The subject of the case related by the former gentleman¶ was a carpenter, thirty-nine years of age, who fell from the dome of the Invalides and finally pitched upon a heap of rubbish. He sustained severe injuries, and was for a time in a very dangerous state, but at the end of five or six months he was sufficiently recovered to be able to resume his employment. He, however, continued ever after to suffer from a frequent dry cough, pain in the left side of the chest, and general indisposition. Fifteen years after he had another fall from a height of twenty feet. He then fractured several of his ribs, had general emphysema, and died in fifteen hours. In addition to the recent injuries, the stomach and arch of the colon were found in the cavity of the chest. They had escaped through an aperture in the aponeurotic portion of the diaphragm, and this was seen to be of old date from the firm attachments of the epiploon to the diaphragm near the opening. In the case of Mr. Morgan,** a man, fifty-four years of age, received an injury of the leg from the fall of a stone, and died in seven days, having suffered latterly from spmptoms of enteritis. On examination after death, the

* Vol. i., 1846-47, 1847-48, p. 150. The abdominal viscera were not displaced in this case. † Vol. iii., 1838, p. 366. ‡ Ed. Med. and Surg. Journ. vol. xix., 1823, p. 282.

§ Lond. Med. Gaz., vol. v., N. S., 1847, p. 583.

‖ Trans. of a Society for the Improvement of Medical and Chirurgical Knowledge, vol. ii., 1800, p. 118. This preparation is in Dr. Baillie's collection, at the Royal College of Physicians, and is figured in his plates—Pl. viii., Fig. 1.

¶ Journal de Chirurgerie par Dessault, 2me année, T. 3me, 1792, p. 9.

** Lond. Med. Gaz., vol. xii., 1833, p. 673.

whole of the stomach, the small intestines, the omentum and the spleen were found in the left pleural cavity and there were old adhesions between these viscera and the parietes of the chest. It appeared that when thirty-eight years of age, or sixteen years before his death, he had been struck by a tree upon the abdomen, and had always after been subject to dyspeptic symptoms and to dyspnœa. It was therefore supposed that the rupture of the diaphragm and displacement of the viscera had occurred at that time.

In the article on ruptures of the diaphragm, in the Dict. des Sc. Medicales, by M. Percy, a case of laceration of the diaphragm from violent efforts during childbirth is related. It proved rapidly fatal.

From the facts which have been mentioned, it will be seen that in the case which has been related the aperture in the diaphragm may have been either a congenital defect, or the result of the crush which the man had sustained some years before his death. I am, however, disposed to regard it as most probably due to the accident. It was distinctly reported that he had suffered from difficulty of breathing, cough, expectoration and pain in the left side of the abdomen for the latter portion of his life, and that he himself ascribed those symptoms to the injury which he had sustained, though the period at which the accident occurred could not be ascertained. It is also evident from the state of the left lung, its great reduction in size and the firm adhesions by which it was bound down, and from the attachments of the displaced abdominal viscera to the upper and under surface of the diaphragm in the neighbourhood of the aperture and to the parietes of the thorax, that active inflammatory action had occurred at a period very considerably anterior to the death of the patient. It is true that in some of the cases in which the aperture in the diaphragm was regarded, and probably correctly, as congenital, adhesions existed between the viscera and the sides of the aperture through which they passed into the thorax; but in such instances the attachments are described as having been looser and slighter than those which were found in the present case.

3. This case does not throw much light on the symptoms which diaphragmatic herniæ produce during life. Like several, however, of the instances which are on record, the displacement of the abdominal viscera gave rise to pulmonary symptoms—dyspnœa, cough, and expectoration; and it is probable that the collapsed condition of the lung was in some degree accessory to the death of the patient, by rendering of much more serious importance the inflammation of the other lung.

What effect the displacement of the stomach and intestines produced on the functions of these organs does not appear. The man was so intemperate in his habits that had any symptoms of dyspepsia been complained of, they could not have had much more importance attached to them.

In some of the cases of phrenic hernia the patients were subject at intervals to attacks of colic and constipation, and several of them proved fatal from the protruded portions of the intestinal canal becoming strangulated in the apertures through the diaphragm. Such appears to have been the cause of death in the cases of hernia through the natural passages described by Schoberus, Quarin, and Bignardi. Fatal strangulation occurred also in the cases of congenital defect related by Dr. Patterson, Sir Astley Cooper, Dr. Leacock, and M. Forlivesi; and the patient mentioned by Petit had been liable during all his life to attacks of colic, but the cause of death is not named. The cases of protrusion of the viscera through punctures of the diaphragm reported by Mr. Boyle, Mr. Greetham and Dr. Reid, also terminated by strangulation, and in Ambrose Paré's case there were occasional attacks of colic. In the instances of rupture of the diaphragm described by Dr. Clarke, Mr. Morgan, Dr. MacFadyen and Dr. A. T. Thomson, fatal obstruction also occurred. In the case recorded by Riverius and in that of Mr. Bowles, the patients died from the violent efforts to vomit excited by the exhibition of emetics.

In the present case there was not, at least during the last periods of the patient's life, any obstruction of the bowels. Indeed during the time he was in the Hospital he laboured under diarrhœa. His previous history in this respect could not be ascertained.

Dr. Peacock, *20th of October*, 1862.

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2. *Villous tumour of the intestine.*

The subject of this disease was a male, æt. 63. He had suffered from intermittent attacks of constipation for several years, and at such times had complained of a fixed pain behind, and to the right of, the umbilicus. The final attack commenced on the first of September, 1862, and lasted over a period of ninety days. It was characterized by persistent pain over the seat of the tumour, and alternations of obstinate constipation (accompanied by fæcal vomiting) and diarrhœa. After death a tumour was found in the right half of the transverse colon; it projected across, so that it blocked up the canal of the intestine; and the

intestine was dilated on the proximal, whilst it was collapsed on the distal, side of the seat of disease. The mucous membrane on each side of the disease was marked by tendency to redundancy of villous growth; and from the opposite side to that of the larger tumour, a small, slenderly pedunculated one, of essentially villous character, was found hanging into the canal. The larger tumour measured about two inches in breadth, and one in depth; it was seated on the lower segment of the intestine, and had caused constriction at that part. When the mass had been dissected, the base and central portions were found to have sprung from the mucous coat, and to be seated on the muscular coat of the intestine. Several small cysts, containing mucus, were found in the base and central portions, and the intervening structures were seen by the microscope to consist chiefly of blood-vessels and connective tissue. The periphery of the mass consisted of a villous investment to the base and central portions, the villi in some places springing deeply from the centre. The villi themselves were of all dimensions, some extremely fine and long, being made up almost entirely of delicate loops of capillaries, others almost papillary in their structure and size, consisting of loops of capillaries invested by basement membrane supporting a perfect arrangement of columnar epithelium.

In the examination of the seat of the disease and the tumour itself, there was not discovered any particular feature of cancer; and at the general examination of the body, the various viscera and the lymphatic system were observed to be free from disease.

Mr. John Croft, *16th of December*, 1862.

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3. *Case of primary cancer of the stomach terminating in gangrene, perforation, peritonitis, and lobular pneumonia.*

The portion of the stomach chiefly affected was the lesser curvature and the anterior wall. The cardiac and pyloric orifices were exempt from the disease, which presented itself in the form of isolated vascular excrescences growing from the mucous surface, and varying in size from that of half-a-pea to two inches in diameter. On section, they exhibited the ordinary appearance of medullary cancer, and the tissue contained well-marked "cancer-cells." The largest mass, situated about the centre of the lesser curvature, and about the size of a crown-piece, had passed into a state of gangrene. The slough was almost detached, and, over a great part, involved the entire thickness of the coats of the stomach. The result was a perforation as large as a shilling, which was

partially closed by recent adhesions to the under surface of the left lobe of the liver. The superior and inferior surfaces of the liver, as well as the spleen and the corresponding surfaces of the diaphragm, were coated with recent lymph, but there was no general peritonitis. The left pleural cavity contained several ounces of recent pleuritic effusion, with flakes of lymph; and, in the substance of the left lung, were three circumscribed masses of granular, friable consolidation, each as large as an orange. One similar mass was found in the right lung. The uterus, mamma, bladder, liver, the lymphatic glands, and all the remaining organs, excepting the stomach, were free from cancerous deposit.

The patient was a married female, æt. 36, who died in the London Fever Hospital, on the 17th of January, 1863, three days after her admission. She stated that she had never enjoyed very good health, but her symptoms had no definite character, and attracted no particular attention until three weeks before admission into the Hospital. At this time she was seized with pain in the abdomen, sickness, and prostration. She was sent to the Hospital as a case of "fever." Her symptoms, after admission, were extreme prostration, rapid pulse, pain and tenderness at the epigastrium, vomiting of bilious matter and occasionally of blood, with dulness and crepitation over the posterior surface of both lungs, particularly the left.

The stomach, above described, has been placed in the museum of the Royal College of Surgeons. Dr. Murchison, *20th of January*, 1863.

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4. *Internal strangulation of the ileum caused by its passage through an aperture in the mesentery.*

J. J., æt. 14, of delicate appearance, was on the morning of the 6th of February, 1863, while engaged in his usual occupation as page in a gentleman's family, suddenly seized with severe pain in the abdomen. He vomited almost immediately afterwards, and suffered much throughout the day from vomiting and pain. His bowels were not moved, but they had been on the day before. The treatment adopted by the gentleman who attended him was of no avail. His sufferings continued throughout the night until, with increasing exhaustion, the pain subsided, and he expired at nine o'clock in the morning, just twenty-four hours from the time of his seizure.

Four days after death I made a *post-mortem* examination of the body, by direction of the coroner, with the following results:—Although the weather had been cool, the body was in a remarkably advanced state of

decomposition. The discoloured surface of the abdomen presented large bullæ filled with black fetid fluid. The abdominal and scrotal cavities were distended with gas. Face covered with dark grumous fluid ejected after death from the nose.

On opening the body, the left lung was found healthy, but the right was greatly contracted, and adherent in every part to its cavity. The stomach was quite empty, and of healthy appearance. On tracing the small intestine downwards, it was found that at about seventeen feet from the stomach a loop of the ileum had passed through an aperture in the mesentery, by which the bowel was firmly constricted. The aperture was about the diameter of a sixpence, and had smooth rounded edges. The loop of intestine was some feet in length, and was distended with gas. It was of a deep purple colour, and contrasted strongly with the colour of the other portions of intestine. There was no appearance of peritonitis.

The state of the boy's health previous to the fatal attack may have been concerned in the suddenness with which death occurred. The rapidity of decomposition was very remarkable. After only four days the body presented an appearance that could hardly have been expected after as many weeks.

Two or three days before his illness the boy was thrown and dragged along the ground, so that his clothes were torn, by a Newfoundland dog which he held by a chain. It is not improbable that the passage of the intestine through the opening in the mesentery occurred at this time, although the symptoms of strangulation appeared later. The rounded edges of the opening clearly showed that it had long pre-existed, and was probably caused by ulceration in a mesenteric gland.

Dr. LEARED, *17th of February*, 1863.

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5. *Parotid calculus.*

This specimen was pressed out of the parotid duct of a gentleman, æt. 30 years.

It had produced a great deal of inflammation in the gland, for many months before its escape, which had been at different times subdued by leeching, fomentations, &c. The duct was never impervious, but was much swollen, and could be felt as a hard cord along the cheek.

During the week previous to its removal, matter formed in the deep substance of the gland, and pointed externally behind the jaw. This was opened, and on using some pressure on the anterior part of the

gland with the finger inside the mouth, a gush of matter escaped through the duct, carrying with it the little concretion.

Mr. Buxton Shillitoe, *17th of February*, 1863.

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6. Small calculus of carbonate of lime from the peritoneal cavity.

In the human body there is found a great variety of calculi, for there is scarcely a secretion the solids of which are not occasionally deposited in that form. The calculus may be formed in the receptacle in which the secretion sojourns for a time, in the urinary or biliary bladder, for example; in the duct along which the secretion flows, as in the case of salivary calculi; or it may even originate in the glandular structure of the secreting organ itself, as occasionally occurs in the prostate. As all calculi are in general composed of a mixture of mineral and animal matter (the former being usually in the greatest quantity), the less inorganic ingredients a secretion contains the more rare are its calculi. Hence it is that we most rarely of all meet with calculi in serous cavities; and the majority of those found there have either been formed elsewhere, and obtained their entrance by ulceration of the walls, or are mere concretions of animal matter. These latter again may be either products of inflammation—portions of lymph, for example—or accidentally detached growths from the walls or organs of the cavity.

The specimen which is now submitted to the Society, although small, is nevertheless interesting on account of its composition, and its seat, for it would appear to be neither an escaped concretion from the intestines or gall-bladder, nor a detached piece of lymph or abnormal growth. It seems, in fact, to be a calculus formed from the constituents of the peritoneal serum.

It was found lying between the bladder and rectum. The concretion is oval, and flattened in shape; measures one-third of an inch in length, one-fourth in breadth, and one-eighth of an inch in thickness. It is covered by a firm, fibrous, shining coat, and consists of a hard cretaceous substance, of a pale-yellow colour, which is partially dissolved in hydrochloric acid with the disengagement of carbonic acid gas. On being heated in the flame of the spirit-lamp, it blackens, burns, and leaves a white residue which is readily dissolved in strong acids with effervescence. On the evaporation to dryness, and resolution of the residue in water, a copious precipitate is obtained on the addition of the oxalate of ammonia, thereby showing the presence of lime. No evidence of the presence of phosphoric acid was obtained. The concretion consisted

mainly of carbonate of lime, a little soda, and some animal matter. Under the microscope it appeared in the form of ill-defined crystalline matter and granules. Dr. G. Harley, *17th of February*, 1863.

7. *A case of atresia ani, and imperforate urethra. Fatal result on the fourth day from birth.*

The child, a male of rather less than average size, but probably born at the full-time, was born on the 21st of January, 1863. The father and mother appear to be tolerably healthy persons, and have several other children, none of whom have any congenital defect.

A few hours after birth it was observed that there was no anal aperture. Dr. John Watson was called in to see the child, and on making an examination of the perinæal region, he found that there was no superficial marking of any kind to indicate the position of the termination of the bowel. It became, therefore, evident that some operative procedure was necessary to enable the child to carry on life. On seeing the child, with my father, I proposed making an incision in the perinæum; and on his agreeing to this, I made a wound in the centre of this region directed upwards and backwards for the extent of one and a-half inches, but without reaching any bowel. No further attempt was made, as it seemed advisable to wait for some bulging of the intestine in the wound as a guide to any further incisions. This indication, however, was not afforded, and the child died on the fouth day from birth. On the third day he made some efforts at taking the breast, but soon relinquished it. No urine was found.

An umbilical hernia, covered only by the non-vascular integument of the cord, and a talipes calcaneo-varus of the left foot, coexisted with other defects of formation.

On making a *port-mortem* examination, I found the umbilical hernia occupied by a portion of the colon, which exhibited evidences of inflammation. The covering of the hernia had become discoloured, and gave out an offensive odour, as if sloughing had commenced. The cæcum occupied a position immediately below the stomach, and the rest of the colon took a very irregular course in the umbilical and hypogastric regions (lying in front of the small intestines), and terminated by what appeared at first to be a blind pouch at the right side of the inferior fundus of the bladder. The bladder itself was pervious as high as the umbilicus, and it and the ureters were much distended, the latter being as large as the small intestines. The left kidney was atrophied com-

pletely, a mere sac being left to represent it, and the right was considerably hypertrophied.

On making a more careful examination of the termination of the bowel, it was found to communicate by a very narrow canal with the bladder between the opening of the ureters. This canal was so small that no meconium had escaped into the bladder, in which the fluid found after death was not more discoloured than might have been expected from its retention and subsequent decomposition. The urethra was found to be impervious for the middle third of its course.

The distance between the termination of the bowel and the floor of the perinæum was over five inches.

A cast of the left foot showed the characters of talipes-varus and talipes-calcaneus, the heel being depressed, and the inner border of the foot raised.

Mr. Partridge, for Mr. Watson, *3rd of March*, 1863.

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8. *Epithelial cancer of tongue.*

The specimen was removed from the tongue of a gentleman, æt. 43 years; his uncle and grand-uncle had both died from the same disease.

The disease occupied the right anterior third of the tongue, and had existed about six months. Extensive ulceration had taken place on the mucous surface under the tongue, and a firm, hard circumscribed induration extended towards the median line of the tongue.

The disease was removed by the knife. A good deal of bleeding followed the operation, but was arrested by the use of one ligature, and the application of ice. The diseased tissue, when cut into, was firm, and when examined by the microscope, showed nucleated cells of various shapes. The nuclei varied in size, and were mingled with others of an elongated shape. Mr. Henry Obré, *3rd of March*, 1863.

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9. *Wounds of the intestines—Death from peritonitis on the fourteenth day.*

N. A., a Cantonese seaman, æt. 23, was brought to the London Hospital, on February 13th, 1863, at half-past twelve A.M., one hour after he had been stabbed in the belly by a fellow-countryman to whom he had refused a loan. When seen by me, an hour and a-half after the infliction of the injury, his pulse and aspect were those of profound shock. As he lay in bed on his back, the transverse colon, the omen-

tum, and, roughly speaking, nearly the whole of the small intestine lay exposed on the skin of the abdomen, and fell over on either side toward the mattress. They had escaped through an oblique clean-cut wound at the umbilicus rather more than a handbreadth long.

The lesser gut was wounded in three places. The mesentery also was pierced, and bled freely until two arteries were tied by the house-surgeon when the patient was admitted. On the mesentery and on the surface of the bowel the lacteals were filled with milky chyle, and the eye could follow their most exquisite ramifications beneath the transparent peritoneum. One of the larger trunks upon the intestine had been divided, and poured out its milky contents to mingle with blood from the adjacent vessels. The wounds were transverse in regard to the axis of the intestinal canal. The larger transfixed the gut so as to leave only two narrow portions of the circumference undivided. The edges were strongly recurved, and the intestinal wall doubled back so as to expose a very large area of rosy, turgid, mucous membrane. The counter-wound here divided the attachment of the mesentery to the gut, and four small arteries, including those already secured by the house-surgeon, were tied at this spot; the ligatures were of fine silk, and were cut off close to the knot. In the two lesser wounds, the recurvation of the lips caused, as it were, a hernia of the mucous membrane, whose rugæ loosely filled the gap. The small intestines generally were empty, and no trace of former contents smeared the exterior of their coils. Small, isolated scybala were felt in the transverse colon, which was well contracted. Compared with dead intestine, the walls of the living bowel were remarkably thick, and this quality arose most likely from the vascular turgor of all the intestinal tissues.

To connect the edges of the intestinal wounds, the continuous suture, with minute intervals between the stitches, was employed. The ends of a piece of fine silk, each armed with a common sewing needle, were respectively passed from within outwards through the edges of the wound and underneath the peritoneum only. They were drawn through until the middle of the thread corresponded with the wound. The needles were then repassed from within outwards in alternate succession through the cut edges of the peritoneum, which was included to the extent of about two lines within each stitch. Preference was given to a double suture, which, acting as it did, like a double boot-lace, enabled an assistant to tighten one end, and thus prevent the already inserted stitches from gaping, whilst a fresh stitch was being made with the other. When all were tightened, the last was knotted twice, and both

ends of the thread cut short. Each wound was thus treated, and the effect was to push the everted mucous membrane towards the interior of the canal, and to bring two peritoneal surfaces in contact. The line of suture formed a retiring angle, at the bottom of which the thread was hardly visible, and at the seat of the largest wound gave to the gut an appearance of anular constriction. The abdominal wound gaped widely, and there was some tension after its lips had been brought together by a metal pin transfixing the whole thickness of each, and by six silver sutures. The dressing of all the wounds occupied nearly two hours, and the intestines were protected by warm flannels until they could be returned into the abdomen. The patient was kept under the moderate influence of opium, was fed at first by the rectum and after the fourth day by the mouth. Fluid nourishment only, and in small, frequently repeated quantities, was given. There was a natural evacuation of the bowels on the third day, and three or four liquid motions were passed on the fourth, fifth, and eighth days, notwithstanding the administration of full doses of opium. Peritonitis commenced at the end of the second day, with some pain, and considerable fever. The pain was completely neutralised by increasing the opium administered, and the disease terminated in death on the fourteenth day. Inspection thirteen hours after death disclosed non-union of the wound in the abdominal parietes, from which the stitches, already about to drop, had been removed thirty hours before death. The abdominal viscera were so agglutinated by abundant recent lymph that all were matted into one mass, and no free peritoneal surface remained.

The edges of the intestinal wounds were thinned and ulcerated and were not adherent. Their firm and broad adhesion to adjacent coils of intestine was the only barrier to the escape of fæces. Two small spots of lymph near the largest wound had an ochreous stain which a stream of water failed to erase, but no fæcal matter had escaped either there or elsewhere. At two of the intestinal wounds no suture was found on slowly breaking down the adhesion and after careful search. The orifices of these wounds had gaped considerably. The suture of the third and largest wound was in the act of separating, and was lightly held at one or two points only. Even this wound had gaped, and was filled up by the peritoneal surface of the adjacent coil, to which its edges adhered, and which must therefore have been in contact with the passing contents of the canal.

The sutures fulfilled a twofold purpose:—In the first place, they prevented the escape of fæces during the time that preceded the agglu-

tination of the peritoneal surfaces, while, in addition, they placed those surfaces in a position favourable for adhesion. In the second place, they helped to secure permeability of the intestine by repressing the everted mucous membrane, whose protrusion tended both to diminish the calibre of the gut and to enlarge the gap in the intestinal wall, which, had the patient lived, and had no sutures been employed, must have ultimately been closed by a slow process of cicatrisation.

Mr. Couper, *3rd of March*, 1863.

10. *Cretaceous deposits in peritoneum, the result of tubercular disease.*

In examining the body of a man who had died of scrofulous disease of the vertebræ, with psoas abscess, a number of cretaceous deposits were found in the peritoneum, of which no symptoms had been observed during life. The man was twenty-eight years of age.

Attached to the peritoneum on the under surface of the liver, which itself was not even depressed, were two irregular nodular masses of cretaceous substance, of which the largest was about two inches in length. A large collection of the same material was placed under the fold of peritoneum between the bladder and the rectum. This was of a flattened pear-shape. It was nearly three inches long, and somewhat less than an inch in thickness. In the various folds of omentum and mesentery were many similar masses, consisting of material like nearly dried mortar. These were placed between the folds of peritoneum. Many similar cretaceous nodules were situated on the outer side of the peritoneum which lines the abdominal walls. Both supra-renal capsules contained nodules of the same substance. It may be stated in connection with this last detail that there was a slight amount of brown discoloration about the face and back of the neck.

There could be little doubt as to the tuberculous origin of those stony masses, although it so happened that no tubercle in its more recent condition was found elsewhere. A *post-mortem* examination, which took place a short time subsequently to this one, was adapted to throw light upon it. In a case of tubercular peritonitis a quantity of soft, plaster-like, crude tubercle was in connection with the serous membrane in many situations, and was so abundant in some places as almost to suggest the use of a trowel. This soft tubercle lay exactly in such positions as have been here described, outside the parietal peritoneum, between the layers forming the mesentery, immediately beneath the peritoneal coat of the intestines, and, in fact, generally in the subserous tissue. We may presume that, in such a case as this, if the patient

lived long enough, exactly such concretions would eventually be formed as are now before the Society.

Considering, then, what a large amount of soft deposit these chalky masses must represent, the case becomes important, as proving that very extensive tubercular disease of the peritoneum may become harmless, and for all practical purposes be completely recovered from.

Dr. Dickinson, *17th of March*, 1863.

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11. *Encephaloid cancer of peritoneum, associated with an ovarian cyst.*

M. S. A., æt. 56, a widow (with five children) was admitted, under my care, into St. Thomas's Hospital, on the 9th of January, 1863. She stated that her abdomen had been getting large for five years, but that twelve months ago the swelling had almost suddenly disappeared, and her belly had returned to its normal size. The dispersion of the swelling occurred in the course of three or four days, and was attended with profuse watery discharge from the bowels, without the usual pain of diarrhœa. Shortly after this, however, the disease reappeared, and her belly has been getting gradually large up to the time of admission. Latterly, she has become weak and emaciated, and generally ill.

On admission, she was found to be extremely thin and weak, but the belly was large, and its superficial veins were dilated and distinct. On examining the belly carefully, a somewhat globular tumour, apparently about as large as an adult's head, was detected within it. This was situated rather more to the right than to the left, seemed to spring from the pelvis, but did not reach to the summit of the abdomen. It contained fluid distinctly. But, besides the tumour, the abdominal cavity manifestly contained a good deal of ascitic fluid, which was readily detected by its fluctuation and by other circumstances, and presented in the situation of the scrobiculus cordis numerous hard lumps and masses, which were immediately in contact with the under surface of the abdominal parietes and seemed to be adherent to them. They were clearly unconnected with the liver. There was some resonance in the region of the stomach, and some also in the left flank. The skin was dry, the pulse feeble. The tongue was parched, brown, and fissured; she had no appetite, and no particular thirst. Bowels regular. Her nights were sleepless.

She continued extremely ill and weak, complaining most of want of sleep, and in some degree of shortness of breath. Latterly, she passed her water involuntarily. She died on the 20th of January, eleven days after admission. The question of tapping was seriously entertained,

but the operation, for a variety of reasons, was not performed. She was treated chiefly with ether, ammonia, morphia, and stimulants.

At the *post-mortem* examination, an ovarian tumour, of the usual kind, was discovered, about the size of an adult's head, and consisting chiefly of one large cyst. There was no *post-mortem* evidence, however, that it had ever communicated with the rectum or any other part of the intestines. Besides the ovarian tumour a large amount of encephaloid cancer was found in the abdomen. This seemed to be exclusively peritoneal, springing in a nodulated form from most parts of the surface, but being developed most largely in the great omentum, which was shortened, much thickened, and lobulated, adherent to surrounding parts, including the anterior parietes, and was evidently the seat of those lumps which had been detected during life, by palpation, beyond the limits of the ovarian tumour. The peritoneal cavity contained much ascitic fluid. The remaining viscera, thoracic as well as abdominal, presented no features of special interest.

There can, I imagine, be no doubt that the concurrence of ovarian tumour with abdominal cancer, in the case just narrated, is to be regarded as purely accidental; but of course, in a diagnostic point of view, and in reference to treatment, this concurrence imparted to the case a special interest. The ovarian tumour had probably been in progress for at least five years, or from the time at which abdominal swelling was first observed; the cancerous growths were doubtless a much later development. From the history she gave on admission, I assumed that the ovarian tumour must have formed a temporary communication with the bowels about twelve months previously; but although such a communication may actually have taken place, there was no distinct proof of it detected after death. Dr. Bristowe, *7th of April*, 1863.

12. *Colloid cancer of peritoneum.*

S. P., a widow (with five children), æt. 55, was admitted into St. Thomas's Hospital, under my care, on the 20th January, 1863. She stated that she had suffered from indigestion and occasional water-brash ever since she was a young woman, and for the last three years from winter-cough and expectoration, but in other respects had been healthy until four or five months ago. At that time pain in the belly came on, and has continued to increase; latterly, some abdominal enlargement has been observed. She was able, however, to go about her work up to three weeks back, when she took to her bed. She was complaining then of

debility, loss of appetite, sickness, abdominal pain, and œdema of the legs and feet. The bowels seem to have been regular all along.

On admission she appeared to be much emaciated, feeble, pale, but without any tinge of jaundice. Her appetite was bad, and she was thirsty. The bowels were rather confined. The tongue was furred along the centre and slightly fissured. The abdomen was large, tense, resonant in front, in the flanks dull, but the dulness shifted somewhat on change of posture. Fluctuation was indistinct. There was some tenderness on pressure, but no hepatic or other tumour could be felt. Chest resonant, breath sounds healthy. Heart sounds natural. Urine not albuminous.

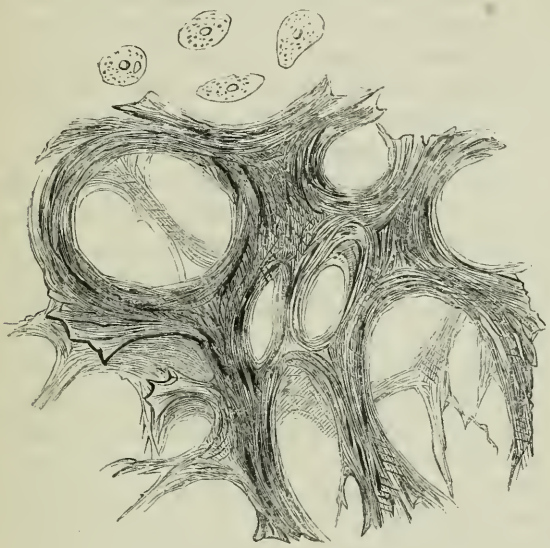
For a week she seemed to improve, that is to say, her condition became more bearable to herself. On the 31st, however, I noted that she had been very poorly for a day or two, and that she was then much worse than she had been. Her breath was short, her cough had become very troublesome, and expectoration was abundant and mucopurulent. The chest was resonant on percussion, but the sounds were masked by rhonchus. The abdomen was larger, much more tense than it had been, and more distinctly fluctuating. The lips and face were somewhat livid, the tongue pale and clean, the appetite poor, and the bowels regular. I had her tapped at half-past three P.M. Nine pints of transparent, glairy fluid, slightly tinged with blood, were drawn off. She was relieved by the operation, and for a day or two seemed a trifle better. The abdomen, however, had been only slightly reduced in size. From this time she gradually sunk, and she died, as it appeared, partly of extreme debility and partly of the thoracic complication. Her death took place on the 6th of February.

She was treated chiefly with nourishment, stimulants, opiates, and other palliative measures.

At the *post-mortem* examination, the abdomen was found to contain a good deal of glairy fluid, such as had been removed at the operation of paracentesis; and the greater part of the peritoneal surface was found affected with well-marked colloid cancer. The growths of colloid were pretty universal, but were most developed around the stomach and in the substance of the great omentum; the latter forming a large, thick, soft, lobulated mass lying in front of the intestines, and extending almost as low down as the pubes. The colloid growths presented the usual characters, but were perhaps unusually gelatinous, transparent, and soft. The disease had invaded the walls of the stomach at the pyloric extremity; and there, over a considerable space, the mucous membrane

was replaced by a raw excavated gelatinous surface. None of the other abdominal viscera appeared to be involved in the disease, or materially unhealthy. Under the microscope the colloid growths exhibited the usual reticulated character, as shown (magnified 220 diameters) in the

Woodcut 31.



accompanying woodcut. The jelly-like matter itself, however, presented, as is frequently the case, few traces of cell-development; one or two of the best-marked cells discerned in it are shown in the woodcut.

The thoracic viscera, except that the lungs gave evidence of not severe bronchitis, were pretty healthy.

Dr. Bristowe, *7th of April*, 1863.

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13. *Malignant tumour in the neck; stricture of œsophagus; aphonia; perforation of œsophageal (?) artery, and death from hæmorrhage.*

History.—D. B., æt. 40, a lamp-maker, came under Dr. Harley's care at University College Hospital in the middle of February. He stated that, notwithstanding having lived a very irregular life, he had enjoyed good health until the last five months, when he began to suffer

from difficulty in swallowing, loss of voice, cough, and pain in the lower part of the neck extending down the right arm. Latterly, all these symptoms had become aggravated, and in addition they had, during the last month, been associated with spitting of blood. On examining the patient's neck there was nothing remarkable to be observed externally. The thyroid was well developed, but not abnormally so. The larynx was mobile, and no hardness or unusual swelling was anywhere apparent. On pressing the thyroid backwards, a slight fulness was perceptible, and the patient complained of pain in the region of the brachial plexus, the pain extending up the neck, and down the arm. On examining the chest by means of percussion, no dulness was found except over a small space in the right sterno-clavicular region. At this point a peculiar tracheal murmur, like what one could imagine would arise from a constriction of the trachea, or from air passing suddenly from a smaller into a larger space, was also distinguishable. The respirations were nineteen in the minute. Over the dull area the heart-sounds as well as the vocal resonance were very distinct. In the cardiac region, on the other hand, the heart-sounds were more than usually feeble, though otherwise normal. Pulse 84, and equal at both wrists. The pupils of both eyes were of similar diameter, thereby showing there was no marked pressure on the cervical sympathetic, although it was evident from the loss of voice that the recurrent laryngeal nerves were affected. As the man complained of great difficulty in swallowing, a bougie of half-an-inch in diameter was passed down the œsophagus; it met with an insurmountable obstruction, however, at a distance of six inches from the teeth, whereas a bougie a-quarter of an inch in diameter was readily passed into the stomach. There was no enlargement or tenderness of any of the cervical or axillary glands. The symptoms above described gradually got worse, especially the spitting of blood, which soon became almost constant. Sometimes pure blood was brought up, on which occasions it was generally fluid, and of a florid colour. The usual thing, however, was for the blood to be mixed with the sputa. The patient stated that he occasionally brought up without any exertion portions of coagulated blood, especially after lying on the left side. He slept easiest on the right side.

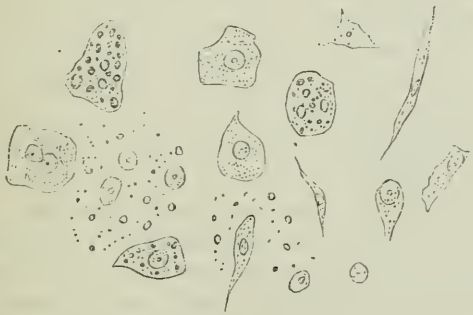
Although it was perfectly evident that the stricture of the œsophagus, and the pressure on the trachea, brachial plexus, and recurrent laryngeal nerves were all due to the same cause, namely, the pressure of a tumour, the true nature of the growth remained a mystery. The first idea was that it might be cancerous; but against that supposition

was the absence of any cancerous cachexia, enlargement of lymphatic glands, and emaciation, together with the patient's statement that all his symptoms supervened suddenly. The next idea was that it might be aneurismal; but here again the signs were almost all negative, so the question remained unanswered till the *post-mortem* solved the difficulty.

The patient was one night suddenly seized with a fit of coughing, and almost immediately expired. After death it was ascertained from his friends that the history he gave of his illness was not perfectly correct. For instead of his becoming suddenly ill, about five months previous to his coming to the Hospital, it appeared that he had been ailing for upwards of a year, and that his symptoms had supervened gradually. This information, of course, strengthened the former and weakened the latter theory regarding the nature of the case.

On examining the neck, a tumour the size of a duck's-egg was found lying to the right of, and partially between, the trachea and œsophagus, immediately behind, and a little to the right of the upper margin of the sternum. The section of the tumour was of a pale, somewhat dirty white, colour, and with the microscope it was found to be composed in great part of encephaloid cancer in an early state of development. (Woodcut.) Some portions of the tumour were of a scirrhous hardness, and contained numerous caudate scirrhous cells.

Woodcut 32.



There was an ulcerated opening into the œsophagus, and perforation of one of the œsophageal arteries had taken place, from which there had been great and fatal hæmorrhage. The stomach was found half full of coagulated blood. The tumour seemed to have originated in one of the lower cervical glands. Dr. G. Harley, *21st of April*, 1863.

14. *Cysticercus from the tongue of a child.*

This specimen I removed from the tongue of a child, æt. 8 years; it was one of three which were under my observation for six weeks, during which time they considerably increased. They occupied the entire thickness of the tongue, one projecting on the upper, under, and lateral surfaces respectively, and appearing as three rounded, firm, semi-fluctuating elevations. On piercing one of them with a grooved needle, a portion of the cyst-wall escaped with the contained fluid, and was easily teazed out through the small aperture. The other two were adherent, and after being punctured, were allowed to remained for a fortnight, when it was found that they had again filled.

They were then laid open, and the interior of the cyst touched with a strong solution of the perchloride of iron, which entirely destroyed them.

On examining the cyst removed, it was found to consist of a thin translucent envelope with clear fluid contents, and a disc-like head about the size of a mustard-seed. The fluid contained a few plates of cholesterine and granules, but no hooklets.

Mr. Buxton Shillitoe, *5th of May*, 1863.

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15. *Intus-susception of cæcum and colon replaced by gastrotomy.*

In this case symptoms of intus-susception had commenced on the 10th of April, in a child, æt. 4 months. Purgatives had been given by a druggist, but Mr. Jay, of Park-street, was consulted on the 13th, and recognized the true nature of the case. Mr. Wells was called in by Mr. Jay, and efforts were made to overcome the obstruction by the injection of water, insufflation of air, and the use of a sponge probang, but without any good effect, although the involuted portion of intestine could be reached by the finger passed into the rectum. Gastrotomy was then proposed, but the consent of the parents was withheld until the night of the 14th. By that time the child was almost in a dying state, but it was thought right to try the slender chance of gastrotomy. Mr. Wells opened the abdomen in the median line, just below the umbilicus, by an incision two inches long. The obstructed portion of intestine was at once felt, and easily withdrawn; but it was so tightly jammed into the colon and rectum—or rather the cæcum and ascending and transverse colon were so closely involved by the descending colon—that they were only separated with great difficulty. Still, the reduction was ac-

complished, the intestines returned, and the wound closed. The intestines above the seat of obstruction being greatly distended by flatus, a few needle punctures were made in them before they were replaced. The child continued to sink, and died five hours after operation. Mr. Wells added, that the fact of the possibility of withdrawing an involuted portion of intestine being thus established, it might be hoped that the operation would be successful if performed early enough.

Mr. Spencer Wells, *19th of May*, 1863.

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16. *Portion of bowel (?) passed per anum.*

The following case was placed in my hands by Dr. Metcalfe, of Long Sutton:—"I was called on the 18th of February, 1863, at five A.M., to see Mrs. C., æt. 44, suffering with severe pain in the abdomen, particularly in the right iliac region; pulse frequent, but soft and compressible; bowels not relieved for at least a week past—(the patient states she has always been of a very costive habit)—complained of feeling very sick, but had not vomited; pressure did not much increase the pain. Ordered her to have Calomel, with Opium, followed by Castor Oil, and Turpentine stupes, and hot fomentations to the abdomen. At next visit, a few hours afterwards, found vomiting was constant; bowels still unrelieved; matter vomited green and offensive, *not* stercoraceous. Ordered effervescing saline aperient.

"Next visit, vomiting continued, but the bowels copiously relieved. Continued the effervescing draughts without the added aperient.

"Vomiting and diarrhœa now set in, and continued for several days, resisting all treatment, nothing being retained on the stomach.

"I now tried repeated doses of Chlorodyne (my own preparing), which at once relieved the sickness and abated the diarrhœa. The diarrhœa, however, not being stopped, at a consultation she was ordered suppositories of Opium, which partially checked it.

"On the 24th of February, being from home, she was seen by a neighbouring practitioner. He was sent for after his first visit hurriedly, and found her in a state of collapse, with about six inches of flaccid, dark-coloured bowel protruding from the anus. This was returned per anum, and stimulants were ordered.

"February 25th.—I again saw the patient, who appeared rapidly sinking; and on the 27th the bowel again protruded, and was finally expelled. The patient for several days being in a comatose condition, and apparently sinking, brandy and beef-tea, &c., were freely given. Reaction at

length took place; abdominal pain and vomiting recurred at times, but were always relieved by the chlorodyne; and the patient made a gradual and slow convalescence, being seen by me last on the 30th of April."

The substance, a few days after its expulsion, was shown to me; and I undertook to exhibit it to the members of the Pathological Society. It measured between three and four feet long, and had evidently originally been cylindrical, and about the diameter of the small intestine. It was of a dark greenish-black colour, extremely decomposed and fœtid, more or less flocculent or shreddy on both its inner and outer surface, and from its softness had been torn in numerous places; still its original cylindrical form was quite unmistakable. I examined the preparation carefully and microscopically, but was unable (perhaps from the parts having undergone gangrene while in the body, and further decomposition subsequently) to detect any characteristic structure. I saw what might have been the remains of either villi or follicles, but could not speak positively with regard to them. I believe, however, that the specimen was really a portion of the small intestine—that it was either the mucous membrane which had exfoliated from a very extensive tract of bowel, or else that it was a highly-decomposed intus-suscepted portion of bowel which had undergone spontaneous separation.

Dr. Harley kindly examined the specimen, and favoured me with the following report:—"This specimen is an imperfect tube of forty-four inches in length, and of an average circumference of two inches in diameter when laid flat on the table. It has a somewhat rough external surface, and a tolerably smooth inner one. Its average thickness is one line. On careful examination it can be separated into two distinct layers—a smooth thin internal layer, and a thicker exterior layer, with a rough external, and a smooth internal, surface. When examined with the microscope, the internal layer shows many of the characters of mucous membrane, such as we find in the small intestine. In the outer coat, however, it is impossible to detect muscular fibres, but this may perhaps arise from the circumstance that the specimen was in a very advanced stage of decomposition before being put into the conservative fluid (alcohol) in which it is now kept. There is no evidence of a third coat, or any traces of an external membrane which might represent the peritoneal covering. But as there are, as was before said, two coats, the specimen must consist either of the mucous membrane covered with a layer of exudation, or of a mucous, *plus* a muscular coat. From being unable to find any evidence of muscular tissue, as well as from the entire absence of anything like a peritoneal coat, I incline rather to regard

the specimen as an exfoliation of the mucous membrane of a considerable part of the bowel, than to look upon it as a portion of the entire bowel itself. This opinion is, however, given with great reservation, as it is now utterly impossible, in consequence of the altered appearance of the specimen, to speak positively as to it true histological characters. We must, therefore, carefully consider the history of the case in forming our opinion of the nature of the specimen."

Dr. Bristowe, *19th of May*, 1863.

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17. *Polypoid outgrowths of the mucous membrane and submucous tissue of the large intestine.*

The rectum was healthy for three inches from the anus; then there was a depressed, oblong scar, two inches long by half-an-inch to one inch broad, where the mucous membrane had disappeared; and from this scar to within a short distance of the ileo-cæcal valve the inner surface of the gut was studded with outgrowths. Some of these were simple mounds rising but slightly above the surface of the gut, others were club-shaped with swollen ends simple or lobed, and some of the latter were a quarter-of-an-inch, many half-an-inch, and a few one inch long. In many places the apices of neighbouring polypi were united so as to form a loose net, the origin of which was traceable to the fenestration of membranous folds; two such folds with several apertures of various sizes occurred at the margin of the scar already mentioned. The longest polypi occurred in the lower part of the gut. When fresh their clubbed ends were dark-blue. The submucous areolar tissue, particularly its connective element, was much hypertrophied, and there was excessive development of the areolar tissue in and between the muscular coats, so that the walls of the bowel were much thickened.

The microscopical examination of the polypi showed them to be simply outgrowths of the natural structure. The preparation was removed from a patient who died in the Middlesex Hospital, in March, having been admitted with dysentery and a phagedenic ulcer of the foot in the previous October. He had had a former attack of dysentery two years before. Mr. Hulke, *19th of May*, 1863.

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18. *Duodeno-colic fistula.*

J. S., æt. 30, an actor, was admitted into Middlesex Hospital, under

the care of Dr. Stewart, on the 31st of March, 1863, complaining of excessive epigastric pain and vomiting, which symptoms had first presented themselves fifteen days previously, and had since recurred several times with great violence. On examination the epigastrium was found to be much distended. The pain was not increased on pressure. The bowels had not been relieved for several days. The countenance was anxious, the pulse rapid and small. The patient survived a fortnight, during which time he vomited, at intervals of three or four days, large quantities (several pints at a time) of a brown liquid, which was at first watery, latterly more or less pultaceous. He complained constantly of severe pain, referred to the epigastrium and right hypochondrium, to alleviate which morphia was several times injected. He stated that the pain was diminished after each attack of vomiting. The bowels were excessively constipated throughout, for the relief of which symptom enemata were used daily. The patient had previously had four similar attacks, of which the first occurred in 1859, the last in December, 1862. Between these attacks he had been subject to pain and occasionally to sickness after meals.

Post-mortem examination.—On opening the abdominal cavity, the stomach and duodenum were found to be much distended and to contain a brownish liquid like thin gruel. The whole of the organs occupying the upper part of the abdomen having been removed *en masse*, their state was found to be as follows:—At about three-quarters of an inch from the pylorus, the duodenum communicates by a wide aperture in its posterior and inferior wall with a pouch about as large as a turkey's egg. This pouch is lined with a smooth coating, which, to the naked eye, resembles mucous membrane, but on microscopic examination is found to consist of connective tissue exclusively. Here and there it exhibits nodules varying in size from that of a millet-seed to that of a large pea. By its posterior wall the pouch is very firmly adherent to the head of the pancreas, in front of which it lies. Anteriorly and inferiorly, its wall is inseparably blended with that of the transverse colon, into which it opens, by a valvular aperture, large enough to allow of the passage of a swan-quill. It is situated, therefore, between the two layers of the transverse meso-colon, which are firmly adherent to those parts of its surface which are not attached to the pancreas or colon, and is in relation with the descending portion of the duodenum on the right, and with the superior mesenteric vein and the branches of the cœliac axis on the left. The sac adheres to the parts, with which it is in relation, by substance of scirrhous firmness, which, on microscopic examination, is found to consist of white fibrous tissue, inclosing fat-cells in its areolæ.

That part of the transverse colon which is adherent is contracted in the direction of its length, its mucous membrane being drawn together in the neighbourhood of the aperture of communication into transverse folds or puckerings. With the exception that a small cavity, surrounded by tubercular condensation, was found at the apex of the right lung, no other lesion was discovered.

The case is one of great rarity, the few examples of duodeno-colic fistula hitherto recorded, either having resulted from cancer (no trace of which existed in the present instance), or having been associated with communication between the gall-bladder and duodenum. (See Murchison on Gastro-colic Fistula. Edin. Med. Journal, July, 1857.)

Dr. SANDERSON, *19th of May*, 1863.

II.—LIVER, ETC.

19. *Cirrhosis of the liver in a child.*

S. W., æt. 11, was first seen by Mr. Roper, of Shoreditch, shortly before his death. He had been ailing about two years and a-half, and had been an out-patient at St. Bartholomew's. During this time he had had more or less pain in the right side, and his skin had been of a yellowish shade; at one time he had been jaundiced. He was at last seized with acute peritonitis, and died. On *post-mortem* examination, the liver was found to be about its usual size, but its surface was studded with nodules about the size of peas, and which at first sight appeared like tumours growing on the organ. On section, the same appearance was found throughout the liver. On closer examination, the disease was seen to be cirrhosis; the apparent tumours were nodules of hepatic tissue, separated by an intervening, tough, pink substance. The former were composed of fatty and degenerating hepatic structure, whilst the latter consisted of an adventitious, fibrous tissue, together with some atrophied liver substance.

The interest of this case lies in the age of the patient and in the question as to the cause of the disease, the two facts bearing on one another; for if, living after the manner of childhood, the disease should occur in a patient of this tender age, it is a clear proof that it may arise irrespective of intemperance, whereas, as the disease is very rare in children, if it could be shown that in these exceptional cases, the patients had lived exceptionally, it would constitute a very strong argument in favour of alcohol being the almost universal cause of cirrhosis. Unfor-

tunately, in the present instance, a not sufficiently good history could be obtained, and from the few facts discovered, no positive conclusion could be formed. The boy came from the lowest grades of society, and had been in the habit of accompanying his father as an itinerant chair-maker, and it was said that he participated occasionally in some of the gin-and-water of his parent; whether the amount he took was not sufficient to produce any effect, or whether alcohol, taken even in a small quantity by a child, has a strong noxious influence, is not determined. Dr. Wilks, 18*th of November*, 1862.

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20. *Portions of an hydatid cyst removed during life from the liver of an Icelander.*

The cystic disease which prevails in Iceland is the cause of one-seventh of the total mortality of the country. No attempt to remove the cysts, which form in the cavities of the body, had been made until Dr. Hjaltalin, the chief physician of the island, commenced the bold practice of puncturing those which occur so commonly in the liver, a proceeding which he has carried out with success on several occasions. During a visit to Iceland last summer, I assisted at one of these operations at Reykiavik. The subject of it was a boy, æt. 10. An incision was first made through the skin, and a large trocar was then passed into the tumour. Portions of membrane, along with a large quantity of turbid fluid, came away. Dr. Hjaltalin has written to me to say that portions of the cyst were subsequently discharged in larger quantities, and that the patient had made a good recovery. The membranes exhibited differed in no respect from those of the hydatid cysts of this country. I was unable to discover any echinococci in connexion with them. Dr. Leared, 16*th of December*, 1862.

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21. *Cancer of liver.*

M. A. K., æt. 25, single, servant, was admitted into Hallett Ward, Westminster Hospital, under the care of Dr. Basham, on the 24th March, 1863, suffering from severe pain in the abdomen.

History.—She came home from service five weeks since. Whilst running up the area steps she struck her forehead against a spike, which stunned her for the time, and necessitated her keeping her bed some three or four days.

As soon as she began to get about again, she experienced a severe

lancinating pain in the hypogastric region, which continued incessantly, and prevented her leaving her bed. A few days after this the epigastric and left hypochondriac regions became tender and painful, and she was very feverish, thirsty, &c.; the pain was increased on motion, and never subsided entirely. No history of any rigors, sickness, diarrhœa, or jaundice could be obtained though she was questioned closely concerning them. Had pain in the left shoulder, a week or two since, lasting a few days; but none in the right.

Symptoms on admission.—Countenance anxious; drawn and pinched; sallow. Conjunctivæ tinged yellow. Eyes sunken, with a dark areola round them. Upper lip raised and tightened. Lies on back with knees drawn up. Pulse, 120, very weak. Tongue foul, dark-brown moist fur in centre, red at tip and edges. Mercurial fœtor of breath; gums red at edges. Abdomen distended, painful on pressure, especially over left hypochondrium, where she states the pain first began subsequent to that in the hypogastric region. Hepatic dulness extending from low down in right hypochondrium across the epigastrium as low as the umbilicus, to the left hypochondrium.

Edge of liver perceptible to the touch; irregular, but apparently smooth. Bowels reported regular. Catamenia appeared six weeks since. Urine high coloured, loaded with lithates; no albumen; no traces of leucine.

Treatment.—Has had her gums touched slightly with mercury previous to admission.

Was ordered to take a grain of opium every four hours, and to have a linseed-meal poultice constantly applied to the seat of pain.

25th.—Pulse 120 to 140, very weak. Slept very indifferently. Pains in abdomen continuous, described as sharp, lancinating, and paroxysmal. Bowels open three or four times in night; motions semi-solid, greyish white. Urine very turbid, loaded with lithates; no appearance of leucine. Crystals of triple phosphate and amorphous urate of ammonia present in abundance.

The pain was relieved somewhat by the means employed; but she gradually sank, and died on the 29th at a-quarter past seven A.M.

Post-mortem examination thirty hours after death :—

Body well-formed, emaciated. Features shrunken; eyes hollow and sunken; abdomen distended. Liver enormously enlarged; surface irregular. Weight on removal, one hundred and seventy-two ounces. Adherent at several points posteriorly. On section studded with patches, more or less round in form, of apparently hæmorrhagic clots,

varying in size and consistence, some as small as a bean, presenting the appearance of a simple blood-clot; others larger, more fibrinous in appearance and of firmer consistence, the largest one being pear-shaped, and of about four inches diameter.

Spleen, kidneys, and intestines generally healthy, with exception of a hard black rounded deposit, opposite the promontory of the sacrum, situated in the mesentery lying within the angle formed by the sigmoid flexure of the colon. No ascites.

Thoracic viscera healthy; a few slight blackish nodular patches at free edge of lungs.

Mr. Holthouse, for Dr. Basham, *7th of April*, 1863.

Report on Mr. Holthouse's case of Cancer of Liver.—Dr. Brinton reported that he had carefully examined various portions, both of the hepatic and mesenteric deposit. He had everywhere found, mixed with the corpuscles and fibrin of a recent hæmorrhage, a cell-growth of evidently cancerous nature, akin to medullary cancer. In the mesenteric masses this cell-growth was softer, more broken down, and more friable, a distant approach towards obsolescence. The whole appearances were only explicable as those of hæmorrhage around, and into, cancerous deposits in the liver and mesentery.

Dr. Brinton, *21st of April*, 1863.

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22. *Case of cirrhosis of the liver, with ulceration of the intestines.*

W. S., a volunteer sergeant, was admitted into the Regimental Hospital, Coldstream Guards, on the 8th of May, 1863. He was much emaciated, and suffered from ascites to a marked degree, without, however, any anasarca of the lower extremities. In spite of every variety of treatment he sank rapidly, and died in three days, not appearing to suffer from anything but debility and abdominal tension. On inquiring into the previous history of his case, it appeared that during March and a part of April he had suffered from severe and obstinate diarrhœa, with occasional hæmorrhage from the intestines, and that on the cessation of these symptoms about the 14th of April, the abdominal enlargement first made its appearance. Having formerly served in the Coldstream Guards, and being anxious, as he expressed it, "to die in the Hospital of his old corps," he was admitted in a state of great debility, from which he could not rally.

The *post-mortem examination* showed the presence of miliary tubercle

in both lungs, the right apex being occupied by cretaceous masses. On opening the abdominal cavity a large quantity of turbid fluid escaped, and the intestines were found to be matted together by tolerably recent lymph. On being removed and slit open, an immense number of cicatrized ulcerations were found along the whole extent. The liver was small, contracted, and nodulated on the surface. Its texture was abnormally firm, and microscopic examination showed an advanced stage of fatty degeneration. Spleen much enlarged.

This case appears to be worthy of note, from the curious condition of the liver in a temperate subject, and as showing the extent to which tubercular ulceration of the intestines may be repaired.

Dr. Farquharson, *19th of May*, 1863.

V.—DISEASES, ETC., OF GENITO-URINARY ORGANS.

I.—KIDNEYS, BLADDER, CALCULI, ETC.

1. *Gutta-percha bougie removed from the bladder by the lithotrite.*

This piece of bougie measured three and a-half inches; and tapered from the size of a No. 5 to that of a No. 1 catheter. It was removed by Mr. Heath from the bladder of a man who had broken it into a stricture, and had it pushed on into the bladder, two months before admission into the Westminster Hospital.

Mr. Heath having first treated the stricture with "Holt's dilator," and thus restored the calibre of the urethra, removed the bougie with the lithotrite-scoop. The gutta-percha appeared to be somewhat corroded, but there was hardly any phosphatic deposit upon it.

Mr. Christopher Heath, *18th of November*, 1862.

2. *Cancer of the right kidney.*

This specimen, which had weighed between sixteen and seventeen pounds, was taken from a girl only four years old. She had been under Mr. Spencer Wells's care in the Samaritan Hospital for a few days, but had gone home and died at Nantwich, and Dr. Williamson had sent up the specimen. The diagnosis of malignant disease had been made during life, from the great rapidity of the growth, which dated only

from last May; and the right kidney was suspected to be the seat of the disease (although the urine was quite normal), from the fact that there was dulness on percussion, and bulging, in the right loin, and all over the right side and front of the abdomen, the intestines being pushed downwards and to the left side. Photographs by Dr. Wright, showing the appearance of the child during life, were also exhibited.

Mr. Spencer Wells, *2nd of December*, 1862.

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3. *Hæmorrhage into the urinary passages from a case of scarlatina? and purpura.*

J. B., æt. 19, belonging to the Shoe Brigade, died on the 18th of January, 1863, thirteen hours after his admission into the London Fever Hospital. The patient had been ill for four days before he was brought to the Hospital, and the medical man who saw him at first pronounced him to be suffering from scarlet fever. On admission, there was no sore-throat, and the tongue was pale, the papillæ not being enlarged. The whole of the trunk was covered with a dusky purple, slightly-elevated eruption mixed up with numerous petechial and purpura-spots. There were also numerous purpura-spots on the extremities. The pulse was 120, and small. Viscid mucus stained with blood ran from the mouth, and petechial spots could be seen on the palate. Blood was also passed from the urethra and rectum. Thirteen hours after admission the patient was found dead, lying in a pool of blood, which had passed from the bowels and urethra.

On *post-mortem examination*, blood was found extravasated in almost every organ of the body. The lower part of the ileum and the whole of the large intestine contained a quantity of dark-coloured blood. There were small extravasations in the sub-pleural and sub-peritoneal tissues, and extensive extravasations in the areolar tissue surrounding both kidneys and ureters. The infundibula and calices of both kidneys and both ureters were distended with firmly coagulated blood, and a large coagulum was also found in the bladder. In the submucous tissue of the bladder were numerous extravasations, from the size of a pin's-head up to that of a sixpence, some of them considerably elevated above the surface. Similar ecchymoses, of a smaller size, were seen in the submucous tissue of the ureters and infundibula of the kidneys, but no laceration of the super-imposed membrane could anywhere be discovered. The kidneys were large and smooth, the right weighing six ounces and the left five. The cortical tissue was hypertrophied and

pale, and the uriniferous tubes were loaded with epithelium and minute granules. The left kidney contained a cyst about the size of a cherry, communicating with one of the calices; and a calculus the size of a hazel-nut was found in the bladder. With the exception of extravasations, the remaining organs were healthy.

It is worthy of note, in reference to the pathology of purpura, that well-formed red blood-corpuscles were found in the extravasated blood in the urinary passages. Dr. MURCHISON, *20th of January*, 1863.

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4. *Malignant disease of the female bladder.*

S. O., a woman, æt. about 50, was admitted into St. George's Hospital in August, 1862, on account of hæmaturia. There was no complaint of pain, or tenderness in the region of the kidney; no blood passed by the vagina. She complained of considerable pain in the pubic region. No tumour could be felt there, nor did pressure there give any inconvenience. The urine was mixed with a considerable quantity of blood, pretty equally distributed through it. No streaks, or masses of solid matter existed in it. It was examined microscopically by Dr. Dickinson, and some large cells of rather suspicious appearance were seen, which, however, Dr. Dickinson could not positively determine to be those of malignant disease, thinking it possible that they might be altered epithelium from the bladder. No renal casts were discovered. The surface of the bladder was carefully examined with the sound on two occasions, in the month of September. No stone existed. The surface of the bladder was rough, and bled readily; but no tumour at that time existed which was perceptible to the touch. The hæmaturia was concluded to be due to disease of the bladder, but it seemed doubtful what the nature of the disease was. I was divided in opinion between malignant disease and a villous tumour not large enough to be detected with the sound. Various astringent remedies were tried, none of which seemed to do any good except turpentine, under the use of which the blood in the urine for a time much diminished in quantity, and the pain was greatly alleviated. This improvement, however, did not last long. She began to wander in her intellects, seeming at times to lose all power of comprehending the things about her. She had also "fits," in which the body was convulsed, and she would lose either the power or the will to move for a considerable time; but nothing like permanent palsy was noticed. Her strength gradually sank, and bedsores formed on the back. But the symptoms due to the disease of the bladder

improved considerably. For the last few weeks of her life no blood was noticed in the urine; there was no great frequency of micturition, nor did she seem to suffer pain. She sank very gradually, and died on the 24th of January.

No examination was made for a long time before death, on account of her hopeless condition; but the symptoms suggested the diagnosis of malignant tumour in the brain, secondary to similar disease in the bladder, with softening of the cerebral substance around it.

On *post-mortem examination*, large masses of soft cancer were found infiltrating the fundus and upper wall of the bladder, and small tubercles of the same disease were deposited beneath the peritoneum in the neighbourhood. One of the morbid masses was so prominent that it must have been perceived with the sound, had that instrument been used shortly before death. The surface of the growth was not ulcerated, but small extravasations of blood could be seen in one or two places below the mucous membrane. The vagina and uterus were in no way affected. The lumbar glands were occupied by the cancer. The right ureter was enormously distended, and the pelvis of the kidney much expanded, with proportionate absorption of the renal substance. The kidneys were granular on their surface, and contained numerous small cysts. Both hemispheres of the brain showed a great extent of white softening. The softened portion extended on the left side from the anterior to the posterior lobe, reaching from near the vertex to within a short distance of the base. The tissue was of a light cream-colour, and yielded readily to a slight stream of water. There was no trace of malignant tumour in the brain.

Primary cancer in the female bladder, without any affection of the uterus, vagina, or ovary, appears to be a somewhat rare disease. Our "Transactions" do not, as far as I can discover, contain any example of the affection. There is, it is true, a specimen of "Fungous Tumour in the Bladder of a Female," described at Vol. V., p. 200; but this, if I understand the description rightly, was an instance of polypus, and not of malignant disease. In the present case the points of interest were mainly—(1.) To determine the source of the hæmorrhage; (2.) To diagnose the nature of the affection of the bladder; (3.) To account for the cerebral symptoms. On the first point there was little difficulty. The few symptoms which were present pointed all of them so exclusively to the bladder that I had no hesitation in pronouncing that the hæmorrhage was vesical; but on the second head I could not give a positive opinion opinion. The absence of traces of malignant matter, which are so very

commonly found in the water, at one period or another, in the course of a case of cancer of the bladder, the dubious character of the cell-forms seen in the urine, and the absence of the sensation of large hard masses on the surface of the bladder, together with the moderate amount of the blood passed, led me at first rather to suspect a villous growth, not large enough or not hard enough to oppose any perceptible resistance to the sound. But the appearance of the head-symptoms led to a correct diagnosis, though, as it turned out, on incorrect premisses, since the softening which did exist was due to the common "atrophic" degeneration, and not to the irritation of malignant tumour. With reference to the latter point, I may mention that the Museum of St. George's Hospital contains a specimen of cancer of the bladder, in which secondary cancer was found deposited on the membranes of the brain.

Mr. Holmes, *3rd of February*, 1863.

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5. *Granular degeneration of the kidney.*

The subject of this case was a butler, æt. 57. He was said to have had good health until eight weeks before his admission as a patient. Latterly he had suffered from flatulency, loss of appetite, and slight œdema of the legs. The last symptom was still present when he came under observation. He was then thin and pale, and his manner was excited and restless. He soon displayed signs of fluid in the pleural cavities. The head-symptoms became more prominent. He was alternately drowsy and excited. The urine became scanty, insomuch that he, more than once, went through an interval of twenty hours without passing any; he became quite comatose, and so died.

After death the brain was found to be anæmic and watery, as it usually is in such cases. The heart was hypertrophied, and both pleuræ contained fluid.

The kidneys were of very small size, the pair weighed but six ounces and a-half. Their capsules were thickened, and more adherent than natural. The surfaces were evenly covered with small hemispherical prominences, among which a few cysts were visible. On section, the cortical tissue displayed a coarse structure, and was much diminished in extent.

Under the microscope, a hardened section displayed very well the intertubular formation of fibroid matter seen in such cases. Large spaces were seen, in which no tubes could be discovered, but only irregular fibrous-looking material. Here and there were

isolated collections of tubes, which were surrounded by this new formation.

Although in this case the symptoms had been of very recent date, there can be no doubt that the organic degeneration had been going on for a long time. The modifications that had taken place in the anatomical structure of the kidney probably were the work of years. As in all kidneys with a granular surface, the alterations must be attributed to an intertubular formation of fibroid tissue, such as occurs in cirrhosis of the liver. The granular surface is a certain indication of this morbid process. Since the tubes of the kidney are of a microscopic size, no mere dilatation of these structures can occasion any roughness perceptible by the unaided senses. In the earlier specimens of the same kind, I have often seen very distinctly the method by which granulations are occasioned. The new formation commences at the surface at a number of detached points, and presses inwards among the tubes, as separate processes, which are very distinct in a successfully prepared section. Subsequently, the fibroid matter contracts, and over each deposition the surface is drawn in. When a number of depressed points are thus produced, the kidney assumes the appearance of superficial granulations. It is often to be seen that the intertubular material travels inwards quite independently of the direction of the tubes. Such of them as are surrounded by it are atrophied and shrivelled by its contracting tendency, and thus great parts of the organ are destroyed. The Malpighian bodies are less compressible, and they and the larger arteries remain uncompressed, but are generally seen to be enveloped by a thick layer of the fibroid growth. It must be evident that the epithelial growth in the tubes thus affected must be much interfered with, but this is subsequent to, and in consequence of, the intertubular development. In the very earliest instances of the disease, it often occurs that the tubes and their epithelial lining are in a perfectly natural state.

Granular degeneration must then be regarded as an affection altogether distinct from such diseases of the kidney as are unaccompanied by that alteration of surface. The symptoms of the disease are not less distinctive than are the pathological appearances. For further details as to the clinical characters of the disorder, I may refer to a paper in the 44th volume of the Med.-Chir. Transactions. (Plate V.)

Dr. Dickinson, *3rd of March*, 1863.

DESCRIPTION OF PLATE V.

To illustrate Dr. Dickinson's Case of Granular Degeneration of the Kidney, p. 184.

Fig. 1. Represents a section of a healthy kidney, made at right angles to the surface. The capsule is seen extending along the right hand edge. The convoluted tubes are closely packed, and among them Malpighian bodies are seen. On the side opposite to the capsule the tubes are beginning to straighten, as if about to enter a cone.

Fig. 2. A section of the granular kidney described in the text, made in the same direction as the one above. The capsule is seen, in a greatly thickened condition, along the left hand edge. The tubes are irregularly displaced, so as to form insular patches surrounded by fibroid material, which has insinuated itself around and between them. This new formation is very abundant next to the capsule, from which it appears to have commenced. At the upper part of the drawing several small cysts are displayed. Several Malpighian bodies are among the tubes; each is surrounded by a thickened capsule. One of the structures has fallen out and left a narrow space.

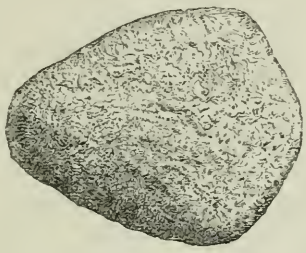
Fig. 1.

Fig. 2.

6. *Flat and triangular calculus (human) removed by lithotomy.*

The chief interest attached to this specimen is the unusual form it presents, viz., being flattened on both sides, and triangular. It is composed of lithic acid, and possesses the usual mammillated surface of this variety of calculus. The weight of it is two drachms and a-half. It

Woodcut 33.



was removed by Mr. Canton, by the lateral operation; and, from the above-mentioned peculiarities, great difficulty was experienced in its extraction, owing to the readiness with which it eluded the grasp of the forceps. The patient was forty-three years of age, and had suffered from symptoms of "stone" for several years. His recovery was complete.

Mr. E. Canton, *17th of March*, 1863.

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7. *Prolapsus of ureters into bladder.*

The patient from whom this specimen was taken was under Mr. Paget's care, it St. Bartholomew's Hospital. He had been in comfortable circumstances, and temperate in his habits; fifteen years ago he had gonorrhœa, but had no subsequent difficulty in passing water until two years ago; six months after this a swelling formed in his perinæum, which opening, discharged pus. Instruments were at this time passed into his bladder. Soon after the opening of the abscess, urine began to flow from his perinæum. Three months ago, three abscesses formed in his perinæum, all of which, a few days after bursting, gave exit to urine; at that time No. 2 catheter could with difficulty be passed; but before long, No. 8 would go into the bladder. When admitted, he was a healthy-looking man, and suffered from no apparent constitutional disturbance. He passed water every two or three hours, through the glans, and in a small stream through two openings in the

perinæum. The water was loaded with what seemed to be pus. The perinæum was much indurated, having many fistulous openings in it, from which urine was freely discharged during micturition. Mr. Paget passed No. 10 catheter without difficulty into the bladder, and made out that there were more ways than one to that viscus. After a few days Mr. Paget laid open the fistulæ on a grooved staff and tied a No. 10 catheter in his bladder. For some days the patient went on well, the wounds granulating, and the urine being discharged in less quantity through the perinæum: however, at the end of three weeks he was suddenly seized with rigors and symptoms of rapid sinking, from which he died.

The *post-mortem* examination disclosed the ordinary effects of obstructed urinary disease in an extreme degree. The bladder was much hypertrophied; the ureters were each about an inch in diameter, and their walls were greatly thickened; the kidneys were enormously dilated, being each about nine inches long; their secreting structure wasted, and their distended pelves containing purulent urine; the left kidney had within it two irregularly-shaped calculi.

On opening the cavity of the bladder, one or two mucous sacculi were found protruded outwards between the muscular fibres. The vesical ends of both ureters were found to be prolapsed, forming pendulous pouches into its cavity, as seen in the accompanying lithograph (Plate VI). The openings of the ureters were reduced to mere pinhole apertures, situated on the most prominent part of each pouch (through these, bristles have been passed in the specimen); the pouch formed by the left ureter was the larger; that formed by the right enclosed a stone about the size of a cob-nut, which hangs pendulous into the bladder.

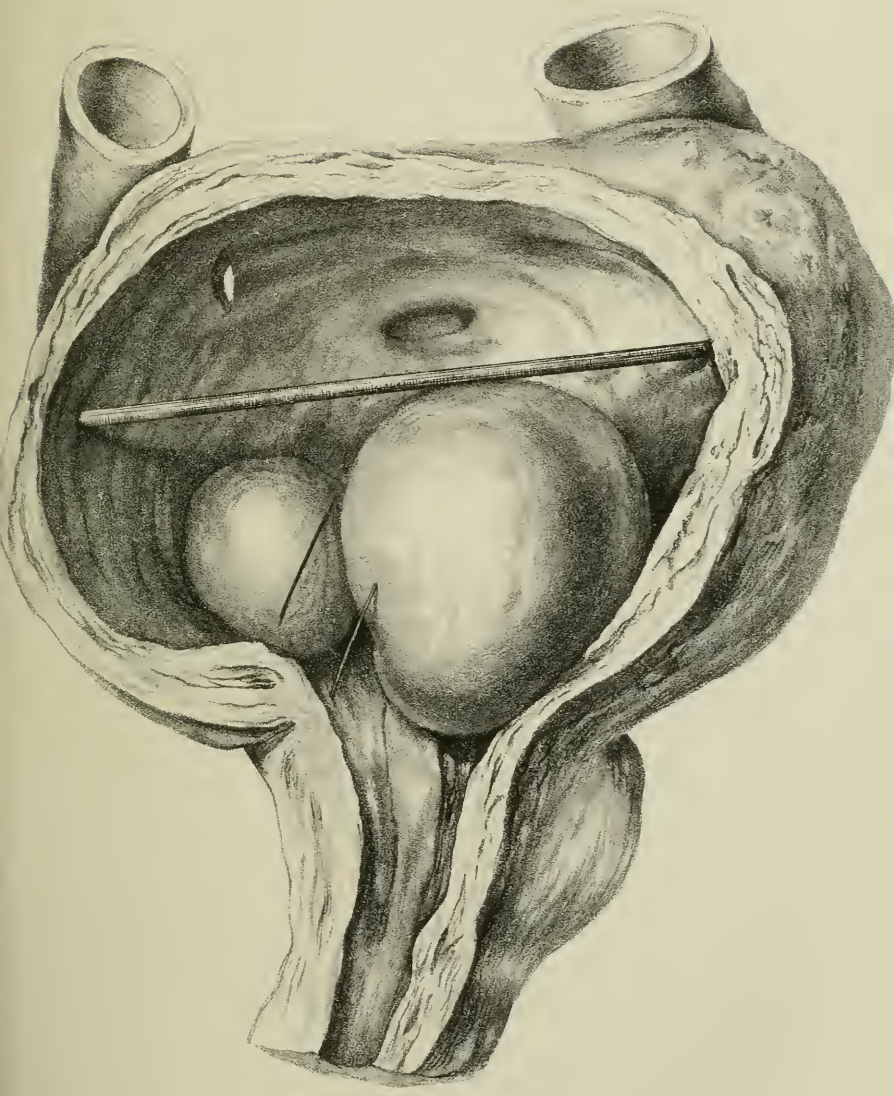
This particular condition of ureters, so far as I know, has not been met with before. At first sight the prolapsus might be thought to be due to the escape of a stone from the kidney, sticking at the vesical end of the ureter, and gradually by its weight and by the pressure of urine from above, carrying down with it the lower end of the ureter into the cavity of the bladder. But the fact that the prolapsus of the left ureter, which is greater than the right, neither contains a stone nor is its orifice large enough to have allowed one to escape, compels us to seek some other explanation. Nor could the muscular force of the bladder, in its efforts to expel the urine, have produced this condition of the ureters; since that would act in an opposite direction to the force which could pouch-out a ureter into the cavity of the bladder.

I would suggest the following explanation for the prolapsus—namely,

DESCRIPTION OF PLATE VI.

To illustrate Mr. T. Smith's Case of Prolapsus of Ureters into Bladder, p. 186.

The vesical ends of both ureters form pendulous pouches hanging into the cavity of the bladder. The openings of the ureters are mere pin-holes, into which bristles have been passed.



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that it is due to the disproportionate size between the tubes of the ureters and the pelves of the kidneys on the one hand, and the vesical orifices of the ureters on the other. The obstruction in the urethra to the discharge of urine seems, to a certain extent and for a certain time, to have produced the ordinary effect of such a condition, namely, the dilatation of the pelvic cavity of the kidneys and the calibre of the ureters, with hypertrophy and sacculation of the bladder; and this condition might continue to exist without further change, until the cavities of the ureters and kidneys attained such a size that the urine within them was acted upon by the pressure of the abdominal muscles; as, for instance, are the contents of the intestines and other hollow viscera. So soon as this occurred, the lower ends of the ureters would be subject to considerable downward pressure during the acts of defæcation and micturition, since their lower orifices are quite inadequate to allow of any but a very slow escape to the very considerable quantity of urine which might collect above. This pressure I believe to have been the cause of the prolapse of their lower ends into the cavity of the bladder.

Mr. T. Smith, *17th of March*, 1863.

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8. *Fibro-fatty tumour of kidney.*

The tumour which has been thus named, was obtained from the body of a man, who died in St. George's Hospital, under the care of Dr. Barclay.

He had been a porter, æt. 55. Six months before his death he first noticed an enlargement in the belly. He, however, went on with his work without hinderance until, about six weeks afterwards, his legs and scrotum became œdematous. When he came into the Hospital, which he did three weeks later, a large hard mass was felt on the right side of the abdomen, which it was not possible to separate from the liver. The legs and scrotum were œdematous, but the man's general health was not much impaired. His appetite was good, his pulse firm, his bowels regular, his urine free from albumen. Soon he began to have throbbing pain on the right side, just above the crest of the ilium; and the tumour was observed to be more prominent, and to reach lower. He frequently vomited, and for a long time this was his chief complaint.

While under treatment the dropsy abated, but the size of the swelling gradually increased. It came to occupy the whole of the right hypochondriac region, and finally reached as low as the umbilicus. Towards the close of his illness he experienced much dyspnœa, and the

signs of fluid were discovered in both pleuræ. He became very weak and emaciated, and sunk without pain, having been in the Hospital for nearly four months.

At the *post-mortem examination* the body was found to be very lean, while the legs were œdematous. The pleural cavities contained a small quantity of fluid. The lungs were both œdematous. The lower part of the right was consolidated, and of a red colour; pieces sunk in water. The apex of the same lung contained a mass of fibroid matter, which looked like the sequel of a healed vomica. The heart was healthy.

On laying open the cavity of the belly a large globular tumour was seen to occupy the right side, immediately under the liver, which was pushed upwards by it, and to which it was attached by slender adhesions. Across the middle of the mass and closely adherent to it was a coil of small intestine. This was pressed quite flat.

The tumour, when removed, proved to be almost spherical. It was connected with the right kidney, and was about the size of the adult head. It weighed six pounds seven ounces and a-half. The aorta and the vena cava were closely adherent to its posterior aspect. The outer surface was somewhat lobulated. On section (Plate VII.), the tumour was found to consist of two distinct materials,—white fibrous tissue, and a softer yellowish material to be presently described,—which were so arranged that the fibrous tissue formed a large network in the interstices of which the other formation was embraced. Large rounded masses of the softer material were separated from each other by broad divisions of fibrous tissue, and further subdivided by delicate septa of the same growth. In the situation of the hilum of the kidney was a great accumulation of the fibroid matter, two or three inches in thickness. Here, as elsewhere, this tissue was so disposed as to occupy irregular intervals between the rounded masses of the cream-coloured material of which the tumour was mainly composed. These masses varied somewhat in colour and in hardness. Some were faintly yellow, and as firm as ordinary encephaloid, while others were nearly white, and softer. One globular mass, bounded and subdivided as described, was six inches in diameter, while the other accumulations were smaller. In the thickest part of the fibrous element was a cavity, which contained only loose shreds, apparently the result of a breaking down of one of the compartments of the tumour.

Close to the upper boundary of the mass was a small angular remnant of the kidney, which included about a quarter of the organ, with its due proportion of cortex, cones, and pelvis. No ureter could be discovered.

DESCRIPTION OF PLATE VII.

To illustrate Dr. Dickinson's Case of Fibro-Fatty Tumour of the Kidneys, p. 188.

Represents a section of Dr. Dickinson's fibro-fatty tumour of the kidney. One side of the section only is represented. At the upper corner a remnant of the kidney is to be seen in a healthy state. Everywhere else are the rounded masses which constitute the bulk of the tumour. White fibrous tissue is seen in large quantity at the lower part of the section, and on the left hand. The same tissue also separates the fatty masses.

The capsule was in its proper relation to this portion of the kidney, and was thence reflected, so as to form a general investure for the entire mass.

Examined with the microscope, the fibrous part had all the appearance of ordinary white fibrous tissue. The material lying between the septa, which has been described as softer, and cream-coloured, had a somewhat granular texture. It appeared to be extravascular. All the accumulations, whether of the hardness of encephaloid, or so soft as to form only loose shreds, had the same microscopic characters. When the surface was scraped, the debris displayed only minute and innumerable oil-globules. A thin section, however, showed that the formation had a sort of skeleton, consisting of a delicate network of fibrous tissue, in the meshes of which the oil-globules were closely packed.

It thus appeared that the tumour consisted of a highly complex arrangement of white fibrous tissue,—thick masses giving off branching septa, and these dividing and subdividing until a network of microscopic minuteness was attained,—holding in its embrace a vast accumulation of oil-globules.

My friend, Dr. Harvey, has kindly examined the growth chemically, and the conclusions thence obtained will be seen to agree with what has been stated on other grounds. Dr. Harvey thus gives the results of the inquiry. The statement refers only to the softer portion :—

" 1. A portion of the tumour was placed in ether, and left for some days. Fat was thus dissolved out.

" 2. A portion was placed in strong liquor potassæ, the whole mass was dissolved. Acid threw down a large albuminoid precipitate. A scarcely appreciable quantity of fat floated to the surface.

" 3. A portion of the tumour was burnt, and gave off strongly the odour of burnt nitrogenous matter. A very faint trace of ash remained.

" 4. A portion was treated with nitric acid and heat: a fine lemon-colour was produced.

" 5. A portion was treated with hydrochloric acid, and assumed a fine purple tint."

The other kidney was healthy, excepting that one or two small specks were observed in the glandular structure, which had somewhat the appearance of excessively small, crude tubercles. On examination, they were found to be identical in structure with the large tumour. They consisted of a mixture of oil-globules and fibrous tissue.

Such a growth as has been described is quite new to me as occurring

in connection with the kidney, though I have on one occasion seen a similar formation, but of much smaller size, attached to the dura mater. The term fibro-fatty has been applied to it as simply describing its components. It may be suggested that the formation was, in the first place, a simple fibrous tumour, and that the fatty material was the product of degeneration. But the comparatively rapid growth of the tumour, which was such as to be very perceptible while he was in the Hospital, is unlike what would be expected of a fibrous tumour. The regular manner in which the fibrous tissue was distributed in septa seems inconsistent with any supposition but that it was originally so constructed.

Besides these considerations, the fact that small points of the same nature were found in the other kidney seems to prove, that from the beginning the structure was of the same compound character as it presented when examined. The disease perhaps began in the cortical part, which was the region of the left kidney where the small spots were detected. The enclosure of the entire mass by the capsule of the kidney shows that at least it commenced within that structure.

It was found that a coil of intestine passed in front of the tumour. This illustrates a remark by Dr. Bright, that such an occurrence may be made a means of distinguishing renal from hepatic tumours. In this case, however, it was not possible to make use of the guide, for such was the compression of the bowels that it must generally have been empty, and could not therefore have been detected by percussion.

Dr. Dickinson, *7th of April*, 1863.

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9. *Tumour of the kidney.*

G. A., æt. 53, a labourer, was admitted into St. Thomas's Hospital, on the 31st of May, 1853, for injury to the head and other parts, of which he died on the 5th of June.

Post-mortem examination.—The skull was fractured on the right side, but the bone was not depressed. A thin layer of extravasated blood was found between the bone and dura mater at the seat of injury. On examining the sub-arachnoid tissue at the base of the brain, it was found to be infiltrated with a soft yellow material, apparently softened fibrin or pus. The pia mater was congested, especially at the base of the brain; but the medullary and cortical parts of the brain appeared to be for the most part healthy. Seven ribs on the right side were fractured, and the pleura was perforated. A small quantity of coagulated blood

adhered to the lung, but the organ did not appear to have been wounded. The left lung, heart, and pericardium were healthy; likewise the peritoneum, liver, spleen, intestines, and right kidney.

The upper two-thirds of the left kidney were healthy, excepting the presence of a serous cyst about an inch in diameter; the lower third was converted into a tumour of irregularly globular shape, lobulated externally, and covered with enlarged and tortuous veins. The tumour evidently arose in the substance of the kidney, was soft and spongy in consistence, and composed of a buff-coloured, opaque material, studded with vascular points, and yielding a cream-like juice. It was distinctly divided into segments (varying in size from that of a walnut to that of a bean) by fibrous septa, and in its centre was a firm straw-coloured translucent mass, evidently œdematous fibrous tissue, whence these septa radiated.

Microscopic examination (*see* woodcut).—The cream-like juice con-

Woodcut 34.

sisted of oil-globules and molecules, many of them free, others collected into clusters, forming irregular masses of various sizes. In neither instance did the globules appear to be enveloped in a cell-wall.

The opaque parts of the tumour were infiltrated with oil-globules, but

occasionally, near the edge of a section, shreds of fibrous tissue could be detected.

The fibrous parts of the growth appeared to consist of fibrous tissue, arranged in a parallel manner, but not so distinctly and wavily as in ordinary white fibrous tissue. In some parts the fibrous tissue was very irregularly arranged, and formed a kind of interlacement, but it nowhere presented cells or nuclei. In many places oily deposits were seen in the interstices of the fibrous tissue, so that when occurring between longitudinally arranged fibres, these became separated, and the fat occupied the oval, elongated interspaces thus formed. The tumour seemed to be a fibro-cellular tumour, in which there was a great tendency to the deposit of fat.

The above case, as will be observed by the date of its occurrence, came under my observation about ten years since. At that time it was a novelty to me, and until Dr. Dickinson exhibited his case of "fibro-fatty" tumour, at the last meeting of the Society, it had never fallen to my lot to see a second. Through the kindness of Dr. Dickinson, I enjoyed the opportunity of examining his case carefully, and I am certain that, as regards the structure of the tumours in the two cases, there was no difference. The naked-eye appearances were identical, and there was an exact resemblance in the microscopical structures. Both of them consisted of fibrous tissue and fat globules exclusively, and neither of them showed any traces of cells or nuclei. I do not venture to give any opinion as to the nature of the tumours, beyond expressing my belief that there was nothing in them to indicate that they were either tubercular or cancerous. Dr. Bristowe, *5th of May*, 1863.

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10. *Kidneys, from a case of suppression of urine.*

C. R., æt. 49, a remarkably well-developed, healthy-looking countryman, presented himself for admission at St. George's Hospital on the 5th of December, 1862. He stated that he had enjoyed uninterrupted good health since childhood, but two years ago he had been squeezed by a horse against the side of his stall, and had then experienced pain in the loins, and had passed bloody urine. For this he underwent treatment at Guy's Hospital with complete relief, and until four days before presenting himself at St. George's Hospital, had never had any recurrence of pain in the loins. Four days before seeking admission at St. George's, he again, and without obvious cause, experienced severe pain in the loins, and for twenty-four hours passed no urine. At the expiration of that

time he voided a considerable quantity, and the pain in the loins ceased. From that time, until he came under Dr. Fuller's care at St. George's Hospital, he had not passed a drop of urine, either alone or with his motions, but he had not felt any pain in the loins, nor had there been any headache, nausea, or other symptoms of general derangement, and he was induced to make application at the Hospital only because he thought that "all could not be right."

On admission his complexion was ruddy, and his aspect was that of perfect health. His skin was cool and moist, the pulse quiet and regular; the tongue clean; the bowels were reported open, and the appetite was good. In short, he did not exhibit any symptom of uræmic poisoning, but, on the contrary, appeared quite well. A catheter was passed into his bladder, which was found perfectly empty. Diuretics were administered, and a warm bath was had recourse to, followed by warm fomentations to the loins, but he passed no water, either alone or at stool, until the evening of the following day (the 6th), when about two ounces of very pale, acid, and slightly-albuminous urine were voided. On the 7th and 8th he passed about the same quantity of urine, of the same character as that secreted on the 6th; the bowels acted once daily, and the alvine secretions were of a healthy colour, and though not quite formed, were not fluid. Up to this time he had continued to present the aspect of health; he had eaten and slept well, and had not complained of any pain or uneasiness in any part of the body, but on the morning of the 9th he began to suffer from uneasiness across the loins, his tongue became coated, and he was dejected in spirits. In other respects there was no material alteration in his symptoms; he voided from two to three ounces of pale, acid, albuminous urine daily; his intellect remained unimpaired, and there was no drowsiness. Indeed, on the 9th he slept less soundly than usual. On the 10th he passed about three ounces of urine, but he vomited at intervals during the day, was very restless, and did not sleep at night. On the 11th his aspect was entirely changed: his face had shrunk, his expression had become anxious, and he looked careworn and much older. The same quantity of urine had been voided as on the previous day, but the pulse had risen to 108, the tongue had become furred and rather dry, and he complained of severe pain, not only in the loins, but also in the pubic region. Dry cupping was employed on the loins, followed by Turpentine stupes; Poppy fomentations were applied to the lower part of the abdomen, and Opium and Gin were given internally, but no relief was obtained. On the 12th the same symptoms continued with increased

severity, the only noticeable difference being that he was still more shrunken and altered in appearance, that the bowels were obstinately costive, that the vomiting was more constant, and that he passed thirteen ounces of urine. Half-an-ounce of Castor-oil had been given in the morning and had not acted, and therefore a Senna draught was prescribed, and this was followed by the administration of an enema, after which the bowels acted freely. In the evening of this day the pulse began to intermit, and the breathing became laboured; and on the 13th, at 1 P.M., whilst sitting up in bed talking to his wife, he suddenly fell back on his pillow, and expired in the course of three minutes.

The body was examined forty-eight hours after death. Externally it was in good condition, that of a vigorous muscular man. The costal cartilages were more than usually ossified; the pleural cavities contained a small quantity of blood-stained fluid, but otherwise presented a normal appearance. The lungs were free from tubercle; the apex of the left lung contained an irregularly-shaped fibrous cicatrix; the posterior portions of both lungs were congested—apparently as the result of gravitation. The pericardium contained a small quantity of clear fluid, but the membrane was healthy. The heart was large and flabby; its ventricles were uncontracted, and contained large elastic recent fibrinous clots. A small quantity of atheromatous deposit existed in the mitral valves; the other valves were quite healthy. The left kidney was enlarged to twice its natural size, in consequence of extreme dilatation of its pelvis; and a small cyst existed on its surface. On making a section, its structure was found to be extremely congested, and contained numerous small cysts; in the pelvis was a large triangular-shaped calculus, weighing 120 grains, which lay with its apex directed towards, and projecting into, the orifice of the ureter. It was not thoroughly impacted in the ureter, but nevertheless it fitted into it so closely that little or no room was left for the escape of urine from the pelvis of the kidney. Moreover, the calculus must have been in this position for some time, for the surface of that portion of it which projected into the ureter was worn quite smooth by friction against its walls. The right kidney was equally enlarged, and its pelvis equally dilated, and it contained a calculus which, in shape and position, was a very facsimile of that in the left kidney. The weight of this calculus was 98 grains. The glandular structure of this kidney was healthy, but in other respects the description already given of the left kidney, and of the calculus which it contained, will apply in every respect to the right

kidney. The ureters were congested, but thoroughly pervious, except at the points where they were obstructed by the calculi. The bladder contained about a half-a-pint of urine.

The kidneys and calculi are preserved in the Museum of St. George's Hospital, and the drawings which were exhibited were furnished by my friend, Dr. Dickinson, the curator of the Hospital Museum.

Dr. Fuller, *5th of May*, 1863.

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11. *Fibro-cellular tumour, surrounding and constricting the right ureter.*

History.—The ureter is surrounded by a pear-shaped mass, compressed from behind forwards, and measuring about three inches from base to apex, and two and a-half inches across. Its base is incorporated with the capsule of the kidney, while at its upper margin it is in relation with the renal vessels. In its passage through the tumour, the ureter is constricted at its origin to the diameter of a very small crow-quill. The pelvis of the kidney is much dilated, and contains three or four very rough mulberry calculi of a reddish-brown colour, but in other respects the organ is healthy. On section three kinds of substance may be distinguished. Immediately around the ureter the naked eye aspect of the tissue is colloid; microscopically it is found to consist of a reticulum of very delicate fibres, infiltrated with gelatinous structureless juice. Outside of this it is of firmer consistence, and exhibits either masses of roundish nuclei, fusiform nuclei in process of transformation into nuclear fibris, or in the firmest parts of the mass wavy bands of white fibrous tissue.

The patient died of ascites dependent on contracted liver. No symptoms referrible to the tumour were recorded.

Dr. Burdon Sanderson, *19th of May*, 1863.

II.—MALE GENITAL ORGANS.

12. *Polypus removed from the anterior part of the urethra.*

This piece of polypus was examined under the microscope by Mr. W. Adams and myself, and exhibits epithelial cells and delicate fibrous tissue. I believe that polypus in the anterior part of the urethra is rare, and it is more frequent in the prostatic portion. M. Velpeau presented to the Academie de Médecine at Paris, last year, a paper on the

rarity of such excrescences in the anterior portion of the urethra. The growth was discovered with the assistance of the urethroscope. I believe these excrescences are similar to those in the trachea described by Dr. Gibb.

In operating, they bleed on the slightest touch, but are easily detached by the instrument. Dr. H. Dick, *7th of April*, 1863.

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13. *Congenital malformation of the genital organs in a male child.*

The child, sent to me by Mr. Todd, of Stepney, exhibited at the meeting of the Society, and from which the accompanying drawing (Plate VIII.), was taken, is unusually large for his age, well-developed, excepting the organs of generation, and has a very strong, deep-toned voice. The pubic region is large; the scrotum divided; the halves separated from each other by a rudimentary penis. This organ is small, and has a very superficial groove along its under surface, denoting the situation of the urethra. A loose prepuce surrounds the body, but not the glans, and drops loosely below. The urethra terminates by a kind of vertical fissure, having a fibrous and thin edge in the perinæum just below the root of the penis.

Commencing on the left of the urethra, and extending an inch backwards along the raphe towards the anus, is the stalk of an apparently vascular growth; in shape like an irregularly formed mulberry, but of an intense red colour. Close adjoining, and attached to it, is the pedicle of a smooth and regularly-shaped polypoid growth, of the ordinary colour of the skin. These growths were congenital. The testicles had descended.

This is a specimen of the male organs developed in every respect on the type of the female, so that but for the testes and the absence of a vaginal aperture, the child might at first sight have been mistaken for one of that sex.

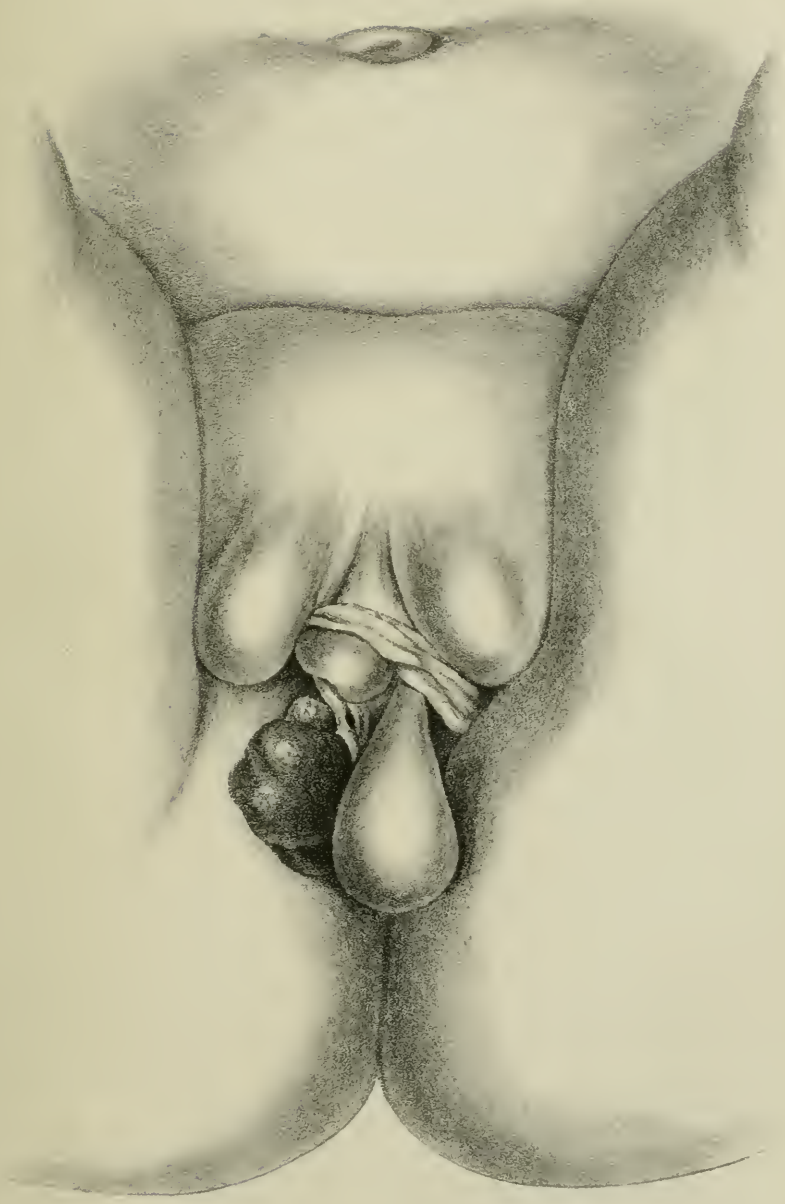
Mr. Gay remarked that some years since he saw an adult with an ordinary-sized and shaped penis, but having two urethræ, one on the dorsum, along the furrow between the corpora cavernosa, and the other in the normal situation. They were both patent throughout, but had no intercommunication. Urine passed through both, but principally by the usual aperture. Mr. Gay intended showing the specimen to the members of the Society, but the man did not keep his appointment for that purpose.

These growths were removed by simple excision; two vessels re-

DESCRIPTION OF PLATE VIII.

To illustrate Mr. Gay's Case of Congenital Malformation of the Genital Organs of a Male Child, p. 196.

The scrotum is divided, the halves being separated from each other by a rudimentary penis. Two polypoid growths (one vascular, the other of the ordinary colour of the skin) spring from the perinæum.



Dr Westmacott del.

W West lith.

quiring ligatures. They proved to be merely outgrowths from the skin, and consisted of that covering, and fat beneath. The polypoid growth consisted of a delicate and simply-granular stroma, which enclosed large fat-cells; each cell containing a crystal of margaric acid, but so delicate that it only became visible by the use of the polariscope. In the other, the stroma was still more delicate, and without any granules or other markings; and the fat, made up of oil-globules, appeared rather as a creamy fluid in its meshes. The appearance of vascularity did not depend upon any undue supply of blood-vessels; but was merely a stain. Mr. Gay, 21*st of April*, 1863.

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14. *Case of epispadias.*

This child, exhibited to the Society, was well developed in all but the genital organs. At the root of the penis the integuments of the abdomen terminated in a crescentic edge, between which and the dorsum of the penis the urine passed. The penis, which is rudimentary, and has a slight groove along the *dorsum* representing the urethra, retracts, so that the glans rests against, and to a degree acts as a valve to, the quasi-urethral orifice. It can be drawn out by slight force to the extent of half-an-inch, but, on being left to itself, instantly retracts. A small preputial fold hangs from its sides. The scrotum is of the usual size, slightly cleft at the root of the penis, and contains testes. This, in all probability, is a case of epispadias, with eversion, or cleft of the anterior walls of the bladder, the latter deformity being hidden, owing to the somewhat unusual circumstance that the walls of the abdomen do not participate in the cleavage.

Mr. Gay, 21*st of April*, 1853.

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15. *Case of hypospadias, with imperfect development of the male organs.*

This case, sent me by Mr. Clark, of Kingsland, is not an uncommon specimen, but is exhibited, as it forms, with the preceding cases, a third variety of genital malformation. The penis is rudimentary and has a kind of preputial integument along its under side, a reddish superficial groove in the place of the urethra, and a slight indentation in the glans denoting the place of its normal termination. The urethra terminates by a vertical fissure at the root of the penis, at a point at which the halves of the scrotum, apparently cleft above by the penis, had re-united;

below which the scrotum is of its usual size and shape. One testicle only has descended. Mr. Gay, *5th of May*, 1863.

III.—FEMALE GENITAL ORGANS.

16. *Ovarian cyst, with secondary cysts on its exterior.*

The patient from whom this specimen was removed had been the subject of ovarian dropsy for three years. Her age was 65. On the 3rd of December, 1862, I performed ovariotomy, and she made an excellent recovery. The tumour removed presented some peculiarities. It consisted chiefly of one large thick-walled cyst, but near the pedicle were numerous other much smaller ones. On its exterior, however, in front, just where it had been in contact with the abdominal walls, were numerous hard growths, resembling warts. Some of these were pedunculated, and others sessile, some exactly resembled cauliflower buds. They varied in size from pins'-heads to the tip of the little finger. In many instances a thin investing membrane was distinguishable, surrounding the buds which had evidently grown within it. In addition to these wart-like productions on the exterior of the cyst, were two or three larger cysts containing fluid. These were as large as pigeons'-eggs, and were broadly pedunculated. One of them had a thin wall, and looked exactly like a knuckle of intestine adherent to the cyst, for which it had, indeed, during the operation, been mistaken for a moment. It was clear that these larger cysts and the smaller warty growths were of the same nature, (cysts with solid intra-cystic growths); and had they been on the *interior* of the parent cyst there would have been nothing unusual in the case.

Mr. Hutchinson, *16th of December*, 1862.

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17. *Fibro-cystic tumour of the uterus.*

Mr. Nunn exhibited, for Mr. Baker Brown, a uterus and appendages. From the fundus of the uterus there grew a large multilocular fibro-cystic tumour. The history of the case, from the notes of Mr. Brown, is as follows:—

M. A., æt. 36, married, admitted on the 26th of November, 1862.

History.—Has been married four years; has never had any children. Six years ago first noticed an enlargement of abdomen; ever since the commencement of its growth the tumour has increased in size between

the catamenial periods, and decreased at the time of menstruation, when, according to her account, "she passes several pints of urine in the twenty-four hours."

In March, 1859, was tapped, and four pints of dark fluid were drawn off. Her girth, at the time when her tumour is at the largest, is forty-five inches, at the smallest thirty-seven inches.

On examination, the woman seems in a tolerable condition of health, but her pulse indicates decided want of power. There is a large multilocular tumour, which is tolerably moveable, and apparently ovarian, to be felt in abdomen. There is an irreducible umbilical hernia, about the size of a small orange, and apparently consisting of a piece of omentum from its doughy feel. This hernia has only existed one year. An examination per vaginam was made, the ovaries could not be felt, but there seemed a rather elongated uterus.

Operation, December 11th, 1862.—The usual median incision being made, some ascitic fluid escaped, after which a cyst with very thin walls came into view. On introducing his hand, Mr. Brown found hard masses in every direction, and he also found that the tumour was so fixed that he could not remove it. He therefore tapped the cyst which was first seen, and closed the wound with silver sutures. She went on without a bad symptom. On the 18th the sutures were removed, and the wound seemed quite healed. On the 19th of December there was a sudden burst of fluid from the centre of the cicatrix, which evidently proceeded from the cyst which had been tapped. She, nevertheless, went on well till the 28th of December, at which time she was about and well, when the tumour began to refill as usual, and she began, as she had done for several months at the same time, to suffer much from vomiting and shortness of breath. It was learnt that during the last refilling of the tumour she had hardly been expected to live. She gradually sank, and died on the 6th of January, twenty-six days after the operation.

A *post-mortem* examination showed:—The wound not looking very healthy—the cyst, which had been tapped, adherent to the edges of the wound—the tumour, as exhibited, a portion so firmly strangulated in the umbilicus as to render it impossible to remove it without dividing the ring—several cysts containing fluid adherent to the pelvis, but not firmly—the whole of omentum adherent to tumour—all the other organs healthy. Mr. Nunn, *20th of January*, 1863.

Report on the above specimen.—On making a vertical section through the cavity of the uterus and the diseased mass, it was seen that the

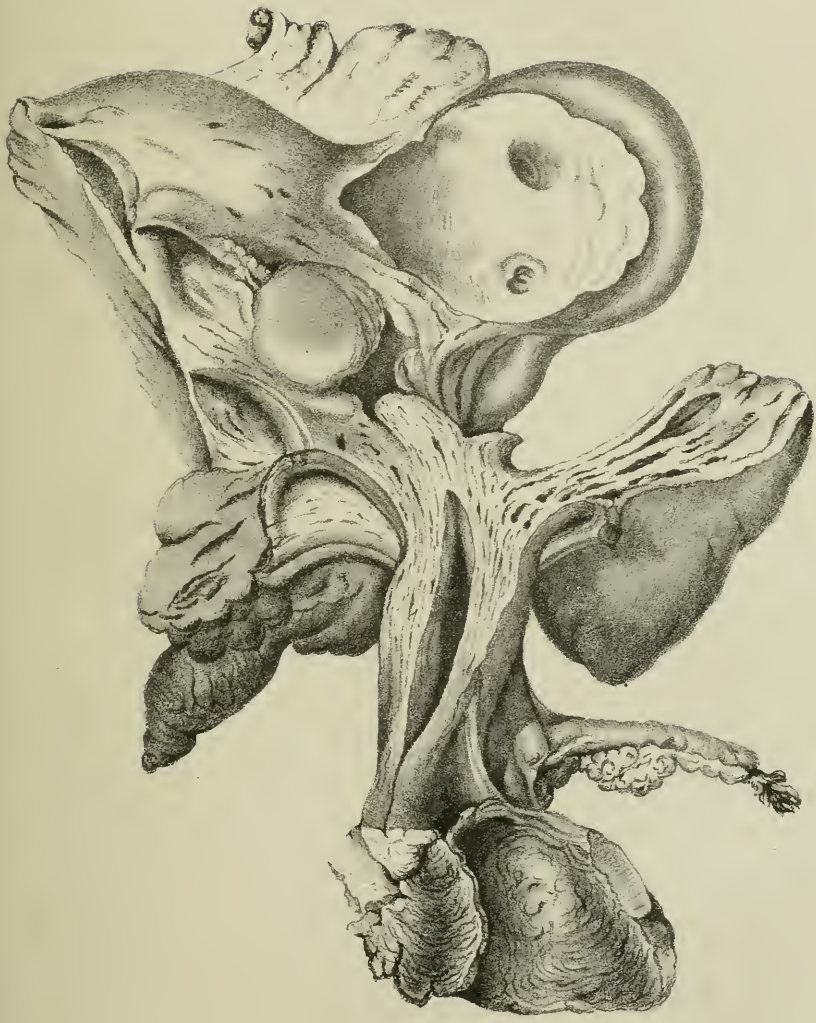
fundus of the uterus was directly continuous with the substance of the tumour, and appeared to bifurcate in consequence of the solid portion of the tumour being separated into two parts, near the uterus, by the interposition of large cysts. The peritoneum covering the uterus was reflected down over the solid substance of the growth, and formed the constriction, or collar, which was seen when the preparation was entire. The mass of the tumour was situated in the sub-peritoneal tissue, and adhered above to the omentum, in the tissue of which some small fibrous nodules were to be seen. On the anterior surface of the uterus, beneath the peritoneal coat, was a small nodule, similar in all respects to the ordinary fibrous tumour, so often seen in this part. The great tumour was formed of a mass of nodules, or rounded tumours, of a fibrous appearance and consistence, separated from each other by large cysts, in many of which a purulent fluid was still contained. The tissue forming these masses resembled, under the microscope, the ordinary fibroid tumour of the uterus, but many of them contained cysts of various sizes, and in almost all some very small spaces, which seemed the commencement of such cysts, could be seen. The walls of the uterus also, near the fundus, showed, on section, a large number of open mouths, which were either the commencement of similar cysts or the cut ends of uterine veins—probably the latter, as the probe could be passed into them for some distance. No resemblance to malignant disease was found in any part of the solid substance of the tumour, except at one point, on the surface of one of the large suppurating cysts. Here an examination of the tissue with the microscope showed a large number of rounded cells interspersed among the fibres, and some of them containing large nuclei, but from the gradual manner in which the reddened, discoloured, and softened tissue on the surface subsided into the ordinary fibroid at a greater depth, without any such abrupt line of separation as would probably be found in a deposit of cancer, it was considered that the appearances were the result of inflammation spreading inwards from the suppurating surface.

From a careful examination we incline to the belief that the disease is a specimen of fibro-cystic tumour attached to, and incorporated with the fundus uteri, but probably originating in the sub-peritoneal tissue in its neighbourhood; and that the adhesions which it had formed to the parietes of the abdomen were a secondary effect of the pressure of the mass by which it had been made to project into the peritoneal cavity. We do not feel prepared to give suggestions for the diagnosis of such a tumour from ovarian disease. Mr. Stuart, of St. George's

DESCRIPTION OF PLATE IX.

To illustrate the Report on Mr. Nunn's Case of Fibro-Cystic Tumour of the Uterus, p. 199.

(The figure is much reduced.)



G.W. Steward del.

W. West lith.

Hospital, has been so kind as to make a sketch intended to show the chief points dwelt on in this Report. (Plate IX).

Mr. T. Holmes,
Mr. F. W. Nunn, *3rd of February*, 1863.

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18. *Communication between an ovarian cyst and the rectum; extensive ulceration of the mucous membrane of the large intestine; phthisis.*

C. B., a female, æt. 40, was admitted on the 18th of January, 1853, into St. Thomas's Hospital, with the history and usual symptoms of phthisis and prolonged dysenteric diarrhœa. She died on the 12th of February.

Post-mortem examination.—Much emaciated; lower extremities œdematous.

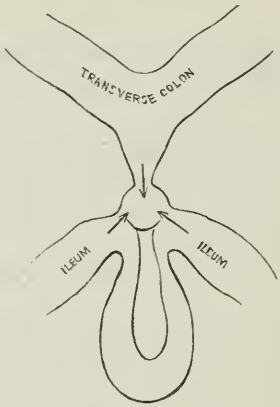
Chest.—Pericardium and heart healthy. Both pleuræ presented numerous old adhesions; and both lungs were the seat of extensive tubercular deposit. A small cavity existed in the right apex.

Abdomen.—The surface of the peritoneum was perhaps rather dry, but generally healthy; and the situation of most of the viscera was normal. The centre of the transverse colon was drawn down into the upper part of the hypogastric region (thus forming a very acute angle with the apex directed downwards), and adhered by cellular adhesions to two contiguous coils of small intestine, each belonging to the upper part of the ileum. The uterus, rectum, and other parts occupying the pelvis adhered firmly to one another. The intestines were very irregularly distended; the jejunum was for the most part of ordinary calibre, the ileum generally much contracted, and the colon (especially in its transverse, descending, and sigmoid portions), distended by hard masses of fæces. The liver was of usual size, but very pale, soft, and fatty. Spleen small, pale, moderately firm.

The mucous membrane of the stomach and of the greater part of the small intestine was healthy; in the lower part of the ileum were two or three enlarged and softened solitary glands. Cæcum and ascending colon healthy. The angle formed in the transverse colon was prolonged into a funnel-like process, which communicated by an opening, allowing of the passage of the tip of the little finger, with a small cavity circumscribed by adhesions (*see* Woodcut). The mucous membrane of this funnel was destroyed by ulceration. The cavity into which it opened communicated by two orifices with the ileum, in the situation before

mentioned—the orifices, though close together, being, if measured along the course of the intestine, about a foot apart. One of these was large

Woodcut 35.



enough to admit the end of the little finger, and the ileac mucous membrane around it was sound; the other was somewhat smaller, but ulceration of mucous membrane was in progress around it.

The descending colon, sigmoid flexure, and rectum were much diseased. In the first were several irregularly-sinuous oval ulcers about an inch long. In the sigmoid flexure the ulcers were larger, more numerous and had coalesced, so that the mucous membrane in lengths of three or four inches was almost totally destroyed, isolated remnants only studding the ulcerated surface. All these ulcers presented the same character; they were superficial, their floor being formed by the submucous tissue, which was of a pale greyish hue, but studded in places with granulations; the edges were little, if at all thickened, but much congested and undermined.

The lower end of the rectum, to the extent of about half-a-foot, was very much constricted, the circumference in some parts measuring not more than an inch. The surface was very irregular, presenting projecting bands and ridges, separated from one another by pits and depressions; in some parts it was deeply congested; in others, of a slate colour. The projecting parts were in some instances portions of mucous membrane; but section clearly showed that the mucous membrane was almost wholly destroyed, and that the muscular coat, more or less

eaten into hollows, formed almost exclusively the floor of the ulcerated surface. In the upper part of the strictured portion were several sinuses, which led to small fæcal abscesses, seated in the cellular tissue external to the rectum. One of these was situated between the rectum and the uterus. The muscular tunic throughout the greater part of the strictured portion measured a-quarter of an inch in thickness; it became considerably thinner, however, in the last inch or two of its course. The cellular tissue around was much indurated and thickened. Above the strictured part the mucous membrane was much congested, and presented numerous ulcers, precisely like those in the sigmoid flexure, but on the whole larger and more advanced. The muscular coat throughout the upper part of the rectum was about one-eighth of an inch in thickness; and even throughout the sigmoid flexure and descending colon it was about twice as thick as natural.

The uterus presented two or three fibrous tumours, from the size of a bean to that of a pea, but was otherwise healthy. The left ovary contained a cyst about as large as a walnut, filled with serum. The right ovary also contained a cyst of about equal size; but its parietes were much thickened, and it was filled with thin fæcal matter. It communicated freely with one of the fæcal abscesses external to the rectum, and thus with the rectum itself.

The above case was brought under the notice of the Society chiefly as an illustration of the fact of occasional communication becoming established between the ovary and the bowel. The mode in which the communication became here effected was, from several facts in the case, tolerably clear. The ovarian cyst had not opened into the intestine, but the intestine into the ovary. It is quite clear that the patient had suffered for a considerable period from very extensive ulceration of the mucous membrane of the large intestine, and that the ulceration in several places (and more especially in the rectum), had caused perforation of the intestinal coats—perforation, however, which had not resulted in sudden death from extravasation into the peritoneal cavity, but which in the transverse colon had been preceded by adhesion between the colon and the ileum, and in the case of the rectum had led to the formation of fæcal abscesses in the cellular tissue around. One of these fæcal abscesses had perforated the ovarian cyst.

Dr. Bristowe, *3rd of February*, 1863.

19. *Portion of the anterior abdominal wall containing the incision made for the ablation of an ovarian tumour.*

The subject from which this had been taken was a married woman, æt. 23, the mother of two children. A multilocular ovarian tumour had been removed, but the patient died, on the fifth day succeeding the operation, of acute peritonitis.

Mr. Maunder exhibited the part, firstly, in order to record the *death* of a patient whose case, up to the completion of the operation, appeared to be altogether favourable; and, secondly, to show that, although the peritoneum had not been included by the sutures used to close the wound, the edges of the former were accurately united in a linear cicatrix, excepting where the pedicle intervened.

Mr. Maunder, *17th of February*, 1863.

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20. *Fibro-cystic tumour of the uterus.*

This tumour was removed by gastrotomy, on April 30, from a single lady, æt. 53. It was a pedunculated outgrowth from the right side of the fundus of the uterus, consisting of a solid fibroid mass, which weighed sixteen pounds nine ounces, and of a large cyst, which had held twenty-six pints of fluid and four pounds of lumpy masses of decomposed fibrin. There had been no important adhesions, and the tumour had been removed with nearly as much ease as an ovarian tumour, but the patient sank from shock four hours after operation. One ovary—the right—was attached to the tumour; the left was connected with the uterus.

Mr. Spencer Wells, *19th of May*, 1863.

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21. *Ovarian cysts and tumours removed by ovariotomy.*

At the meeting on the 19th of May, 1863, in accordance with his annual custom, Mr. Wells stated the result of all the cases upon which he had operated since the previous session of the Society. At the last meeting of the previous session, in May, 1862, he had operated on thirty-six patients. Since that meeting he had operated on twenty-seven others, of whom twenty-three had recovered and four died, making a total of sixty-three cases, with a result of twenty deaths and forty-three recoveries.

The ages of the patients had varied from 17, the youngest, to 61, the eldest. In no case was a cyst unilocular, and in some cases the multi-

locular cysts, or semi-solid tumours were very large. Their structure did not call for detailed description, except in one instance, in which the tumour was described as adenoma of the ovary, which Mr. Wells thought the most appropriate designation, although it might be called fibro-epithelioma, or alveolar adenoid tumour. It is identical in structure with the adenoid growths first described in connection with the mammary gland; and it was very interesting that it should now be found in connection with the ovary. He had not seen a similar growth in the ovary before, nor had he found it described by any author. A drawing, of Dr. Hughes Bennett's, of the structure of chronic mammary tumour, might have been taken from one of the sections shown to the Society. The tumour was removed, on the 3rd of September, 1862, from a single lady about 50 years of age, who recovered perfectly after the operation. It consisted in great part of an ordinary multilocular cyst; but one large cyst was filled with semi-solid matter, which, at first sight, looked exactly like soft cancer; but after hardening in spirit, and examining thin sections, the true character was made out; and it was seen that the surface of the growth was fringed with papilliform villi, its substance showing in vertical sections a delicate fibrous stroma, forming round or oval alveoli. These alveoli are lined with densely-grouped epithelial cells, forming a continuous zone, which encloses an area loosely packed with cellular elements of similar form. On the margins of most sections the contents of the alveoli are frequently seen to protrude, like papillæ, through ruptured portions of the fibrous septa; or the lining zone of the alveolus has become liberated and divided, so as to assume the appearance of a long cylindrical band, or column of epithelial cells. The tumour, therefore, belongs distinctly to the class of fibro-epithelial growths, and, from the folliculoid character of its alveoli, would, Mr. Wells thought, be most appropriately classed as adenoma.

In another tumour, which was removed in December, 1862, from a single lady, 53 years of age, and which had been surrounded by many pints of ascitic fluid, there was a mass, of the size of a large adult head, presenting all the characters of adenoma. Mr. Wells said that, although ovarian tumours of this character presented many of the appearances of soft cancer, and resembled malignant tumours in the great rapidity of their growth, yet they offered important practical differences, that they showed neither tendency to invade neighbouring parts nor to return.

The practical lessons which might be learned from these cases were,

1. The refutation of the common belief that ovariotomy was not to be performed until a patient was broken down in health by long-continuance of disease. In this, as in every other disease, the better the general health of the patient, the more likely was she to recover from any operation. 2. That the dread of the operation was unduly great, twenty-three out of the twenty-seven patients having recovered, and only four died; and, 3. From the occurrence of bronchitis in two cases, which led to the use of the lancet, it was urged that mechanical relief must be occasionally given to heart and lungs, when oppressed with the removal of large tumours, or parts of the body which had previously received a large supply of blood.

Mr. Spencer Wells, *October and December*, 1862.
January, February, and May, 1863.

VI.—DISEASES, ETC., OF THE OSSEOUS SYSTEM.

1. *Case of complete dislocation of the foot backwards from the astragalus, with fracture and dislocation forwards and upwards of the anterior portion of the os calcis.*

This specimen was removed by amputation from a man, æt. 24, on 15th of October, 1862, and the true nature of the injury was only revealed upon its subsequent dissection. The appearances of the foot after the accident presented all the symptoms of dislocation of the astragalus forwards, and the excessive injury to the soft parts precluded the possibility of success attending any other measure than that of amputation.

The accident was produced by the man's foot becoming wedged between the spring and step of a locomotive, the man's body falling outwards; the whole force being therefore concentrated upon the os calcis.

The foot was found after the accident to be turned inwards, and considerably fore-shortened upon its outer side, and in front of the external malleolus there was a bony projection, which threatened a rupture of the integuments, and this was regarded as the head of the dislocated astragalus, but it subsequently turned out to be the displaced anterior portion of the os calcis. The soft parts were completely disorganized, rendering amputation absolutely necessary. Upon dissection

the true nature of the injury was readily revealed. The astragalus was found to have maintained its normal position; its head, which was visible between the tendons of the long extensor, and the tibialis anticus muscles, resting upon the upper border of the scaphoid bone. On the outer side of the foot the displaced anterior portion of the os calcis was seen lying upon the upper surface of the cuboid, having been enucleated from its natural position. The posterior part of the os calcis, with the foot, was dislocated backwards, and its upper articulating surface was visible behind the corresponding surface of the astragalus, which was seen in front. The tendons of the peronei muscles were much stretched, behind the external malleolus, the extreme end of which was broken off. The form of injury revealed by this specimen was believed to be very rare, the chief point of interest in the case being the difficulty in its diagnosis.

Mr. Bryant, 21*st of October*, 1862.

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2. *Necrosis of the occipital bone.*

The specimen was removed from a child between five and six years old, and comprised, for the most part, both tables of the skull. It measured nearly three inches from side to side, and about two inches from above downwards. The internal occipital protuberance and fossæ for the posterior cerebral lobes were very clearly marked. The history in connection with this piece of bone was very interesting:—The child had had a violent fall some seven or eight months previously, and struck the back of his head against some hard substance. An abscess subsequently formed between the skin and the bone, but no cerebral symptoms had at any time supervened, nor had the child's general health materially suffered. The child was admitted as an out-patient at St. Thomas's Hospital, under Mr. Sydney Jones's care. The necrosed bone was loose, and was raised and removed without difficulty by means of an elevator.

The subjacent dura mater was covered with granulations, which bled rather freely on removal of the bone. The wound filled up very rapidly, and the child left the Hospital well, but with a considerable space in which the pulsations of the brain might be observed.

Mr. Sydney Jones, 18*th of November*, 1862.

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3. *Necrosis of the lateral mass of the os sacrum, with abscess of the neighbouring sacro-iliac joint.*

A pale, weakly boy, æt. 8, was admitted into the Middlesex Hospital, under the care of Mr. Moore, on the 26th of June, with sinuses at the upper part of the thigh, behind and below the great trochanter. They were the sequel of an abscess that had burst nearly three months before. In August during Mr. Moore's absence, the boy came under my charge. At this time he was sinking from the profuse drain of pus. I was able, as my colleague had been, to satisfy myself that the hip-joint was not diseased, and thought that the sinuses might lead to a sequestrum about the inter-trochanteric line of the femur. On tracking them they were found to run upwards in the hollow between the trochanter and tuber ischii to the pelvis, but whether to the sacro-iliac joint or sciatic notch, close by, could not be determined at the time. Ten days after this operation, an attack of peritonitis terminated the boy's life.

At the *post-mortem* examination the sinuses were found to communicate with a small cavity, formed by bony outgrowth from the margin of the sciatic notch, just in front of the posterior inferior spinous process, and from the lateral masses of the fourth and fifth sacral vertebræ. This cavity contained a small loose sequestrum, exfoliated from the lateral mass of the third sacral vertebra. The adjacent sacro-iliac joint was full of pus. Shreds of disintegrating fibro-cartilage adhered to the articular surfaces. The bony tissue was hyperæmic, but not carious. This affection of the joint was doubtless consecutive to the necrosis of the contiguous bone. The peritonitis had a tubercular origin, and was not connected with the joint-abscess.

Mr. J. W. Hulke, *2nd of December*, 1862.

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4. *Bony anchylosis of the knee-joint forwards at a right angle, after traumatic inflammation.*

The subject of this remarkable distortion was a boy, æt. 18, who when eleven years old received a wound in the knee-joint from an axe, which grazed the bone over the inner condyle, and opening the knee-joint gave exit to the synovial fluid. Acute inflammation followed, but this yielded to local and general treatment.

The limb was retained in its normal position by means of a Liston's splint, and, at the end of the tenth week the boy returned home, and in

a short time afterwards moved about on crutches with ease and comfort. Up to the eighteenth month from the period of the accident, the limb remained perfectly straight, the articulation possessing a very slight degree of mobility.

All pain having subsided, even when using the limb, the various means of support were unadvisedly removed.

As time rolled on, the limb gradually assumed a bent position forwards, from an obtuse to a right angle. Thus, for a period extending over five years, this deformity was permitted to increase and pass without any means being adopted to counteract its advancement.

During a period of at least two years, the limb had been sufficiently strong to support the entire weight of the body, which was accomplished by bringing the foot downwards and backwards, at the same time flexing the sound limb almost to a right angle, thus forming by this position of the limbs a perfect quadrangle. This boy, with his deformed leg, was considered to be a superior rider, in consequence of which his horsemanship was frequently called into requisition, so that between carelessness and overstraining, the limb, in its weak state, was forced forwards into the rare position described.

Dr. Grant observes, "This case came under my charge for the first time on the 17th of May, 1861, on which date he was entered a patient in the General Protestant Hospital. A consultation of the Medical Board being convened, excision of a wedge-shaped piece of bone from the joint posteriorly was decided upon as being most judicious; the parents, however, were firm in their resolve, in consequence of which I was obliged to amputate at the lower third of the thigh, much contrary to my wishes. The operation was performed after the usual manner, and at the end of the fourth week cicatrization was complete.

"*Examination of joint.*—The structures surrounding the joint appeared perfectly healthy, presenting no unusual induration or adhesion, excepting the alteration in the ligamentous connection, which was entirely monopolised by extensive ossific deposit. The anterior portion of the condyles rested upon the anterior portion of the head of the tibia, the whole interspace posteriorly being filled up by perfect ossific deposit, possessing great strength and firmness, so perfectly moulded and compactly set as to its cancellated structure. Dimensions of joint considerably increased. Patella dislocated outwards, and anchylosed to the outer surface of the external condyle. Head of fibula intact."

Mr. Wm. Adams observed that he had examined this specimen carefully, and there was no doubt that it offered a rare example of com-

plete bony anchylosis of the knee-joint at a right angle forwards, as described by Dr. Grant. True bony anchylosis was most liable to be produced, either by the traumatic form of inflammation, of which this was an example; or by the rheumatic form of inflammation, which more frequently gave rise to it; it seldom followed the scrofulous form of inflammation, and when it did, it was only after the lapse of many years. In the Museum of St. Thomas's Hospital, was a specimen exactly like the one he had now exhibited, but nothing was known of its history; and he was not aware of the existence of any other specimen of the same kind of distortion.

Mr. Wm. Adams for Dr. J. A. Grant, *2nd of December*, 1862.

5. *Successful extraction of a bullet, which had been more than six years lodged in the anterior extremity of the os calcis, by an incision through the sole of the foot.*

Captain O'Brien, æt. about 35, consulted me in January, 1858, as to whether a bullet, which had been more than six years lodged in the bones of his foot, could be removed by any surgical operation. The bullet was one fired from a Colt's revolver, and therefore of small size. The accident was occasioned by a friend, whilst at pistol-practice, incautiously cocking his pistol, by placing his thumb on the hammer whilst the pistol was directed downwards in a direction sideways—not an uncommon practice with those who use Colt's revolver.

The ball entered the foot on the outer side of the os calcis, close to the tuberosity where a fistulous opening still remained, and passed obliquely downwards and forwards with an inclination inwards towards the centre of the sole of the foot.

Immediately after the accident this gentleman was seen by five surgeons in Dublin, and various attempts to remove the ball were made. The patient informed me that the surgeons agreed in believing that they could touch or strike the ball with the probe and forceps, but in consequence of its being firmly impacted in the bone, they were unable to extract it. He therefore put up with the inconvenience of having this ball lodged in the foot for more than six years before he consulted me. This inconvenience was at times very considerable, and frequently for several weeks prevented his taking any walking exercise. The original wound remained as a fistulous opening, and a variable amount of discharge from it constantly took place. Sometimes this was very slight, and, feeling comparatively free from inconvenience, he would be

induced to take an unusual amount of exercise, or perhaps to dance. Any such indulgence, however, was very apt to be followed by pain and swelling of the whole foot, and sometimes the foot remained inflamed for several weeks.

Altogether, the inconvenience arising from the presence of the ball was such as to induce the patient to seek further advice, and for this purpose he came to London to consult the late Sir Benjamin Brodie, who, after a careful examination, advised that no further attempts should be made to extract the ball. Before leaving town, however, he consulted me, and said that unless I gave him any confident hopes of being able to remove the ball, he should follow Sir Benjamin Brodie's advice for a year or two, and then if the inconvenience of repeated attacks of pain and inflammation of the foot continued, he should certainly submit to amputation.

Under all the circumstances, I advised that further attempts should be made to extract the ball by enlarging the existing fistulous canal with the gouge, and then using some of the recently invented double-screw drills.

On the 21st of January, 1858, after the late Dr. Snow had administered chloroform, I enlarged the fistulous track through the bone with a gouge, and, thinking I had touched the ball, applied the bullet-drill, but without success. The depth of the fistulous track in the bone was nearly three inches, and its direction led towards the median line in the sole of the foot; no portions of lead were brought out either by the gouge or the drill, and as the operation had been tedious, it was thought prudent to discontinue the attempt at extraction. My friend, Dr. H. Dick, assisted me in this operation.

It now occurred to me that an incision through the sole of the foot would enable me to reach the anterior extremity of the os calcis, where there seemed to be almost a certainty of the ball being lodged, if, indeed, it had not passed through the under surface of the os calcis and was imbedded between the bone and the deep muscles of the foot. One symptom appeared to favour the latter supposition, viz., a disposition to contraction in the toes, which had been gradually coming on. Against this, however, was the fact, that deep pressure in the sole of the foot did not cause pain, or give any indication of the presence of the ball.

My friend, Mr. James Mouat, whose experience in gunshot-wounds entitles his opinion in such cases to great weight, now saw the patient with me, and agreed to my proposition to cut into the sole of the foot in the hope of *meeting* the ball, instead of making any further attempt through the old fistuous track.

On the 9th of February, Dr. Snow again administered chloroform, and, in the presence of Mr. Mouat and Dr. Dick, I made a longitudinal incision through the sole of the foot, down to the surface of the os calcis, close to its anterior extremity, or junction with the cuboid bone. The surface of the bone in this situation was found to be roughened, and therefore I removed a portion with the gouge, which at once opened a communication with the old fistulous canal previously described as having been made by the ball in its passage from the tuberosity of the os calcis obliquely through the bone. A long probe could now be passed completely through the os calcis into the sole of the foot, yet the ball remained undetected. Mr. Mouat now considered that if the wound in the sole of the foot were kept open, the ball would probably gravitate towards it with necrosed bone.

After a fortnight there was a difficulty in keeping the wound in the sole of the foot open, and as necrosed bone could be felt by a probe, I determined to remove as much of this as could easily be reached by the gouge, in the hope of reaching the ball, and therefore on the 1st of March, after Dr. Snow had again administered chloroform, I dilated the wound in the sole of the foot, with the assistance of Dr. Dick, and applied the gouge, removing some necrosed bone, and with it the bullet, which travelled down the gouge.

The ball was completely surrounded with a thin layer of white necrosed bone, separated from the surrounding cancellous bone, and having an irregularly roughened external surface, but smooth and in some parts even well polished internally, evidently by the friction of the ball, which had moved about freely in its bony cell, about half of which was brought away entire, and was exhibited to this Society. All the necrosed bone was removed, and the surface of the cavity felt everywhere firm and healthy. The ball was a little, but not much altered in shape, and had evidently been touched by the gouge in one of the previous operations.

The patient progressed in the most satisfactory manner after the operation; not an unfavourable symptom presented itself, and in a month he was enabled to leave town with the wound in the sole of the foot healed, and the old wound also very nearly closed. There had not been, either before, or after the operation, any extension of inflammation to the ankle-joint, so that the use of the foot was free and perfect in every respect. Mr. Wm. Adams, *2nd of December*, 1862.

6. *Old-standing disease of the hip-joint, complicated with abscesses in the muscles within the pelvis.*

This preparation was taken from the body of a man, æt. 30, who died recently in the Middlesex Hospital, where he had been several months, under the care of my colleague, Mr. Moore. He always lay on the left side, with the right thigh strongly flexed and adducted. Whether there was anchylosis could not be positively determined during life, but the extreme suffering which the gentlest examination of the limb produced rendered a slight mobility probable. There was a very profuse drain of pus from two sinuses behind and below the trochanter major. These had been explored, but without finding any sequestrum. In August, having then charge of him, I considered the propriety of removing the upper end of the femur, believing the suppuration to be kept up by the presence of a sequestrum detained in the acetabulum, but the great enlargement of the liver forbade any operative measure. At the *post-mortem* examination it was found lardaceous; its weight was seven pounds.

The head and neck of the femur had disappeared, and the lesser trochanter rested against the ilio-pectineal eminence. The great trochanter covered in the acetabulum, and effectually prevented the escape of several small sequestra, which had been thrown off the floor of this cavity, and were lying on the surface or embedded in granulation-tissue. Some were thin films, others comprehended the entire thickness of the bone; and corresponding to these latter were perforations in the acetabular floor, which communicated with a large subperiosteal abscess on the pelvic side of the bone. The muscles about the joint were much wasted, and in an advanced degree of fatty and fibrous degeneration. They were riddled with sinuses, which communicated with the joint, and emptied themselves into the two sinuses below and behind the trochanter major; they were also continuous with other sinuses which ran into the pelvis, along the tendon of the external obturator muscle, through this muscle and the fascia closing the foramen ovale, along the tendon of the internal obturator muscle through the lesser sciatic foramen, and along the tendon of the iliacus internus muscle. These sinuses ended in the muscles just named. The tendon of the iliacus internus, where it turned over the brim of the pelvis, enclosed a bony *plaque*, and a second was found in a dense mass of fibrous tissue in the situation of the femoral attachment of the pectineus and adductor brevis muscles.

The extension of suppuration from the joint along the tendons, into the true and false pelvis, giving rise to abscesses in the intra-pelvic muscles, is the interesting feature in the preparation. They were excluded from the pelvic cavity by dense fasciæ.

Mr. Hulke, *16th of December*, 1862.

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7. *Disease of the knee-joint, and of the femur and tibia beyond the epiphyses.*

This specimen had been removed by amputation from a lad, æt. 17, who had suffered relapses of inflammation for five or six years. Persevering attempts had been made to save the limb, and also to avoid resection of the joint, and the lad had been for more than a year under care in the London Hospital, with a few months' interval at Margate. At one time he had greatly improved, and anchylosis was hoped for: but a relapse occurred, and indications of periostitis of the femur became developed. It was at length determined to excise the joint, and then amputate or otherwise according to the state of things disclosed. This was done. On opening the joint the ends of the bone were found completely denuded of cartilage, but everywhere covered by granulations, and firm, and quite free from caries. Thin sections were now sawn from the ends of the femur and tibia, and in both bones above the epiphysal line (which was still represented by a thin layer of cartilage), a condition of extensive red softening was found. In the case of the femur it almost amounted to abscess, the soft cancellous bone being infiltrated with lymph, almost resembling pus. The epiphysis itself in each bone was hardened and whitish, the diseased condition commencing immediately above it. In both bones there was evidence of periostitis of the shaft, beginning just above the epiphysis, and causing thickening of the membrane, and the deposition of rough layers of new bone. Such being the condition of things, amputation was at once performed.

The lad made a good recovery.

Mr. Hutchinson, *16th of December*, 1862.

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8. *The sac from a case of spina bifida, which was successfully removed by operation.*

The child from whom this specimen was removed was a fine, and in every other respect, a well-formed, boy; the first child of young and

robust parents. Before removal, the tumour was pyriform, and about the size and shape of a ten-ounce necked cupping-glass. It hung from the upper dorsal region of the spine, was flaccid, and only partly filled with fluid. The integuments over it were thin and translucent, and over the most prominent part of the swelling were two small excoriations. At the base of the tumour could be felt a deficiency in the bones beneath, corresponding with the position of the spines of the third and fourth dorsal vertebræ. There was no paralysis or other symptom of deficiency of nervous power.

From the time of birth Dr. Wilson applied pressure to the base of the tumour, so as to isolate it as far as possible from the spinal canal. To relieve the tension of the integuments, which had become extreme, on the twentieth day after birth it was punctured with a trocar, and eight ounces of fluid were drawn off; and during the next twelve days it was tapped four times, about two ounces of fluid being taken away on each occasion.

A steel clamp was applied to the base of the tumour for five days before removal; and on the thirty-third day after birth, the sac and integuments were shaved off by Dr. Wilson at the neck of the tumour, which latter he grasped firmly with a pair of circumcision forceps. The cut edges of the spinal membranes were lightly touched with a red-hot knitting-needle, to promote adhesion, sutures were applied to the wound and pressure to the pedicle of the tumour. This operation was undertaken as a matter of necessity, owing to the ulceration of the integuments of the tumour and the threatening rupture of the sac. The child recovered from the operation, without a bad symptom. Twenty days afterwards the wound had entirely healed. Two months after the operation Dr. Wilson reports, "the chink in the vertebræ was found to be closed by a solid mass, which projected somewhat beyond the neighbouring vertebral spines, and appeared to be formed of bone."

The sac, as Dr. Wilson reports, consists of thin integuments covering the dura mater, to which they are unadherent; it is lined internally by a layer of epithelium resting on a basement membrane, and coated on its free surface by a layer of lymph, more or less organised.* The dura mater is quite an independent coat within this tumour, being but loosely connected with the integuments; the sac contains no nerves. The fluid was contained in the sac of the arachnoid, and not, as is usual, in the sub-arachnoid space.

* *Vid.* Museum of St. Bartholomew's Hospital, Series *a*, 202.

This case possesses interest:—1. as regards its situation, namely, in the upper dorsal region—quite an unusual one for this malformation; 2. the connections of the sac are exceptional, in that no part of the spinal cord or its nerves were contained in the sac; again, the fluid was within the sac of the arachnoid, and not in the sub-arachnoid space; and it is worthy of remark that the spinal membranes were unadherent to, and distinct from, the skin.

The peculiarities of this case tend to confirm the view first published by Mr. Prescott Hewett,* that the absence of cord and nerves in the sac is due to the unusual situation of the fluid, and that where the sub-arachnoid space is distended, as is generally the case, the spinal cord itself, or at least the posterior roots of the nerves, are found either adherent to the interior of the sac, or passing through its cavity. To the normal position of the spinal cord and nerves, in this case, was probably due the absence of any symptom of paralysis or incomplete innervation in the parts below.

M. Cruveilhier has advanced, and others have maintained, a theory, that spina bifida owes its origin to an abnormal adhesion, formed during the development of the parts, between the spinal membranes and the external skin, thus arresting the closure of the vertebral laminæ and spines.†

As opposed to this view, Dr. Wilson points to the significant fact, that in this, as in most other cases, the dura mater is unadherent to the skin, and that in many instances it is found separated from the skin by a layer of subcutaneous fat of considerable thickness. Again, except in the sacral region, the arches of the vertebræ are closed before the development of the overlying integument.‡ He would regard spina bifida rather as a hernia of the spinal membranes, consequent on an arrest in the development of the spinal laminæ, to be classed with harelip, cleft palate, and other arrests of development, as they are termed, occurring in the median longitudinal line of the body.

The fluid of this sac was not examined as to its power of reducing the blue oxide of copper—a peculiarity first discovered by Dr. William

* Cases of Spina Bifida, with remarks, by Prescott Hewett. London, 1844.

† Dr. J. W. Ogle refers the occurrence of a cutaneous cyst within the cranium to a similar cause, viz., to adhesion between the scalp and dura mater before the development of the cranial bones.—Transac. Path. Soc., vol. vi. p. 12.

‡ On this point, *vid.* Kölliker Entwichlungs-geschichte (Leipzig, 1861), from which, though the passage is obscure, I gather that the sequence in order of development is as stated above.

Turner,* and subsequently shown by him to be possessed by the fluid of hydrocephalus.† More recently, Dr. Hoppe has established the identity of the reducing agent in this fluid with grape-sugar.‡

Surgically, this case is one of interest, having been the first operation of the kind that has terminated successfully in this country. The operation, however, in this case, was adopted as a measure of necessity, owing to the condition of the integuments; nor would the result of former operations have justified its practice under other circumstances. The success of the proceeding was, no doubt, much promoted by the skilful management of the case—in the pressure applied to the base of the tumour before its removal, so as to narrow its neck and isolate it in a degree from the spinal canal, and in the early adhesion between the cut edges of the spinal membranes, produced by the application of the cautery; measures which we cannot but think would have been of no avail, but for the absence of the spinal cord, and nerves from the cavity of the sac: and for such cases only Dr. Wilson would recommend this proceeding.

Mr. Thomas Smith for Dr. Wilson, *6th of January*, 1863.

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9. *Acute necrosis of the tibia. Amputation at the knee-joint.*

A male child, between 2 and 3 years of age, came under Mr. Holmes's care on the 13th of November, 1862, at the Hospital for Sick Children, on account of acute disease of the tibia. He had always been delicate and weakly. The present attack had commenced a fortnight before admission, without known cause. Swelling and redness were noticed on the front and on one side of the ankle, with considerable pain and fever. Matter was let out by incision a few days afterwards. On admission, the whole of the front of the leg, from a very short distance below the knee, was red and œdematous, and the foot was still more swollen. A probe passed into the incision went directly down to rough bare bone, and the ankle-joint seemed destroyed. A fluctuating swelling about two inches below the head of the bone was opened, and the bone found exposed here also. The limb was intensely painful and tender, and the child appeared very weak. On the 16th, three days after admission, another collection of matter, between the two former, was evacuated.

* Proceedings of Royal Society, May 18th, 1854.
† Dr. Bennett's Clinical Lectures, 1859.
‡ Virchow's Archives, p. 68.

The bone here also was found bare, and apparently dead. The thickened periosteum could easily be distinguished in the wound. The general health slightly improved after the evacuation of the matter, but the pain and irritation were very great, and the relief was only temporary. Slight cough was noticed on the 30th of November, but on examination of the chest no distinct evidence of phthisis was detected. The limb was removed on the 3rd of December by amputation through the knee-joint, with a long anterior and short posterior flap. The patella was left, and care was taken not to wound the cartilage of the femur. The position of the upper incision rendered it impossible to cut a very long flap in front; but the line of union fell well behind the end of the bone. Everything went on perfectly well for about a fortnight. The patient, having lost the irritation of the diseased bone, began to improve in appearance, and slept well. A slight increase of the cough, which was noted on the 15th of December, subsided after the use of a mustard poultice, and on the 20th of December, the stump having perfectly healed, and the cough being much better, he would have been discharged, if his home had been a comfortable one, but was kept for a short time out of charity. During the next few days, however, the cough increased rapidly, the appetite failed, he began to show increasing emaciation; the physical signs of bronchitis were detected, and those of pneumonia soon became apparent. He sank rapidly, and died on the 15th of January.

On *post-mortem examination*, a few scattered grey tubercles were found in the right lung, and some old pleural adhesions in various parts of the cavity; there was also some recent lymph, especially at the base of the lung, and here the lung-tissue was so much consolidated as to sink in water. The left lung was extensively consolidated by inflammation, and there was a great quantity of recent lymph in the pleura, especially at its junction with the pericardium. Some scattered tubercle existed both in the lung and bronchial glands. The pericardium was occupied by a very thick layer of recent villous lymph. The interior and substance of the heart were healthy. The stump was perfectly healed. A vertical section was made through it, and it was exhibited to the Society to show that the patella was as freely moveable as in the natural joint, and that the cartilage replacing that bone at this age, as well as the articular cartilage of the femur, were perfectly healthy, and free from all trace of inflammation. The tibia displayed necrosis of the whole shaft. The periosteum was much thickened, and in the parts

where the abscesses had presented, it had sloughed. The investing shell of bone which had commenced to form around the narrow shaft was irregular, and corresponded exactly to the periosteum, being entirely deficient where the latter had sloughed. At the lower end of the tibia was a large carious cavity, communicating with the ankle-joint. This cavity was found occupied by a nodule of dead bone much resembling the osseous nucleus of the epiphysis.

The points of interest in this case appeared to be—

1. The extent and rapidity of the disease and the sloughing of the periosteum.

2. The speedy and perfect union of the stump (which it will be noticed was so taken as to involve no wound of bone) notwithstanding that the patient was dying from constitutional causes.

3. The absence of all inflammation in the deep tissues of the stump, promising a most useful member had the child grown up.

Mr. Holmes, *20th of January*, 1863.

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10. *Acute periostitis of tibia involving the ankle-joint.*

L. H., æt. 14, was admitted into the London Hospital on the 5th of December, 1862, with the right leg, from instep to knee, swelled, hot, œdematous, and exquisitely tender. On the 7th of December Mr. Maunder saw the patient, and finding fluctuation in the limb, with great constitutional disturbance, free incisions were made, giving exit to pus, and disclosing the whole anterior surface of the shaft of the tibia, bare of periosteum. For three days the child seemed better, but on the 11th of December the appetite failed, and the tongue, previously moist, was dry and brown. A probe introduced through one of the incisions passed obliquely across in front of the ankle-joint; rubbing bare bone in its course. Believing the patient's vital powers to be quite inadequate to the arrest of the disease and to the restoration of the limb, and that her only chance of life was in amputation, the operation was immediately performed above the knee. The patient is convalescent. On examination, the shaft of the tibia was found to be deprived of its periosteum over two-thirds of its whole surface, the denudation being prolonged over the anterior surface of its inferior epiphysis, detaching the anterior ligament, and so opening the ankle-joint. The latter contained pus lying upon the anterior portion of the superior articulating surface of the astragalus, the corresponding portion of cartilage of which was dis-

coloured. The term "acute periostitis" is applicable to this case in contradistinction to the term "acute necrosis."

The disease had progressed with remarkable rapidity, the child having been apparently in her usual health ten days previous to amputation. There was no history of injury, and the patient had not been ill during the past three years. Mr. MAUNDER, *20th of January*, 1863.

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11. *Dislocation, with fracture of the astragalus.*

J. S., æt. 49, was admitted into St. George's Hospital on 3rd of November, 1862, with the following history:—Two days previously, at Calais, he had fallen down some stairs, twisting his right foot under him. The surgeon who was called in, diagnosed a dislocation of the astragalus, and by the exercise of great force—by the united traction of several men (it was said *six*), without the application of chloroform, he managed to reduce the dislocation. The man was then sent by his own wish to England.

On admission, the parts appeared in perfectly good position, but there was much swelling, especially about the internal malleolus. In about a week an opening was formed in this situation, the foot became slightly displaced outwards (splints could not be borne), and a small portion of fractured bone, with a horizontal edge, much resembling the upper fragment of a fracture of the tibia, presented in the wound. This became more and more loose. Abscesses formed on the outer side of the foot, and extended some distance up the leg on both sides, requiring free incisions. On the 19th of December, as the exposed bone was quite loose, the principal wound was enlarged, and the portion of bone, shown to the Society, was removed. It comprised the whole astragalus, with the exception of its head, which articulates with the scaphoid. The upper, or trochlear, surface for the ankle-joint was entire. It was denuded of cartilage, except a very small portion. The surface for the internal malleolus had been fractured, and was deprived of cartilage; it was this portion which had projected at the wound. Some other small portions had also been fractured off. On passing the finger into the cavity left by the removal of the bone, the portion attached to the scaphoid could be felt, apparently in its natural connexions, and firm. The smaller fractured portions were loosely attached to the soft parts. These were removed a few days afterwards. (December 26th).

There was very free suppuration for some time afterwards, and the man

(who was of a feeble appearance), suffered considerably from the drain of the abscesses; but under good diet, free stimulation, and the use of morphia, he gradually recovered. At the date of the exhibition of the specimen (3rd of February), all the wounds, except the principal one, were quite closed; the discharge from this latter had become trifling. The man was able to get up, the leg having been fixed in pasteboard splints, and he could bear to put the toes upon the ground. The leg seemed a little shortened, but the parts were not in a condition allowing of perfectly accurate measurement.

He was discharged, quite recovered, in the month of March. At that time the wound had soundly healed. There was a good deal of motion in the situation of the ankle-joint, and it appeared to be rather increasing. He could bear a little weight on the foot. The shortening was about three-quarters of an inch. A cast of the foot was taken, and was exhibited to the Society.

Mr. T. Holmes, *February 3rd and April 24th*, 1863.

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12. *Parts, after successful excision of the hip.*

The patient in this case was a little girl, æt. $4\frac{1}{2}$ years at the time of admission (May, 1862) into the Hospital for Sick Children. The disease was of two and a-half years' standing. The operation was performed on 28th of May, under the influence of ether. The head of the bone was found, to a great extent, absorbed and quite altered in shape. Between the head and trochanter there was a large pit in which a portion of loose bone was lying, and the whole of the neck was ulcerated. The section was made just above the small trochanter. The acetabulum was superficially ulcerated, and was scraped out with a chisel until healthy bone was thought to be reached. There was no dislocation. The operation was rendered somewhat tedious in consequence of the altered shape of the parts; the carious pit in the neck of the femur being taken at first for part of the acetabulum. In consequence of this, the proceeding was a more severe one than it would have otherwise been, and was followed by some constitutional disturbance and irritation about the wound, requiring the removal of the splint for a time. Her convalescence was more seriously retarded by an attack of measles, in the month of July, at which time that disease prevailed in the Hospital. When she had recovered from this attack the wound healed steadily, and early in September, the discharge had become insignificant, and the wound appeared quite superficial. She was now relieved

of the splint, and sat up. Passive motion of the limb showed a fair amount of mobility, and gave no pain. Towards the end of October she began to walk, and by about the end of November the wound had closed. In the early part of December she was sent to Brighton, being then able to walk freely, and with no pain. The measurement on the right side from the anterior superior spine of the ilium to the internal malleolus, was eighteen and three-quarter inches, and on the operated side seventeen and a-half, showing a difference of one and a-quarter inch. There was no spinal curvature, and no appreciable twist of the pelvis.

When she went to Brighton she seemed in perfect general health; but after a short stay there she was sent back (in the latter end of December), with the report that she had taken cold, and had fallen off in health. Soon after her return, well-marked inflammation of the lungs came on, on both sides; against which she struggled for a considerable time; but gradually became weaker, general œdema set in, and she died on the 10th of February, 1863.

On *post-mortem* examination, a good part of both lungs was found to be consolidated. No tubercles were discovered in the lungs, or any other part of the body. The kidneys were smooth, and rather increased in density. All the other viscera were healthy.

The remains of the end of the femur were found drawn up into the acetabulum by the tendon of the psoas muscle. The end of the bone was rounded off and enlarged by the deposition of a quantity of substance resembling cartilage to the naked eye, but under the microscope showing a purely fibrous structure. This was united to the surface of the acetabulum, in all parts of its circumference, by a large quantity of cellular adhesions, allowing, however, of a good deal of motion between the bones. The cavity of the acetabulum was enlarged, and its walls thickened by inflammation condensing the bone. The whole was enclosed by a thick capsule of fibrous tissue, much resembling the original capsular ligament. The skin-wound had given way during the later weeks of her life, and was ulcerating in a considerable extent, but a thick mass of fibrous tissue separated it from the parts concerned in the operation. The bones were perfectly sound.

It will be seen that this preparation bears a strong resemblance to the one which is preserved in the Museum of the Royal College of Surgeons, from the patient in whom Mr. White, of Manchester, removed the upper end of the femur five years before death. In that case, as in this, a perfect capsule had been formed around the end of the femur, which was united by soft tissue only to the acetabular cavity, and the

limb had become quite useful. These two preparations appear to be the only specimens at present described in the London Museums, of perfectly successful excision of the hip-joint. Two other dissections of successful cases are mentioned by Dr. Hodges,* one of them from a patient of Reid, the other of the late Mr. Jones, of Jersey. In Mr. Hancock's case, described and figured by Mr. Barwell,† the cure was not quite complete, as pus was still discharging from the seat of operation, and carious bone was still exposed. The new capsule, however, was almost completely formed, and the bones would probably have been moveably united to each other. This, then, may be regarded as the normal result of the successful excision of the head of the femur.

Mr. Holmes, *17th of February*, 1863.

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13. *Parts removed in excision of the ankle-joint.*

The following is the history of the case:—J. M. æt. 15, tall and large-framed for his age, and of the dark strumous type, a native of the neighbourhood of Colchester. Has done "labouring" work for the past eight years. Father and mother healthy, one sister has died of phthisis. Has himself always enjoyed good health, and it was not until last March that he complained (at first, occasionally only) of pain at the outer malleolar region of the left leg. At length, the pain increasing in intensity and frequency, some slight swelling appeared at the site of the pain. He does not remember having received any injury to the ankle at that or any other time. The swelling and pain continued to increase, and occurred also on the opposite side of the joint; he was therefore compelled to forego work entirely, and was confined to bed in the Colchester Infirmary (May, 1862), where he remained for four months, during which time his ankle was several times blistered, and, subsequently strapped over:—all, however, was unavailing, for the swelling around the joint continued steadily to increase, and the power of motion became proportionately diminished. The pain, nevertheless, had now quite ceased, and did not at any future time recur.

He was admitted into the Charing Cross Hospital in October last, when the appearance of the ankle was that shown in the annexed engravings:—

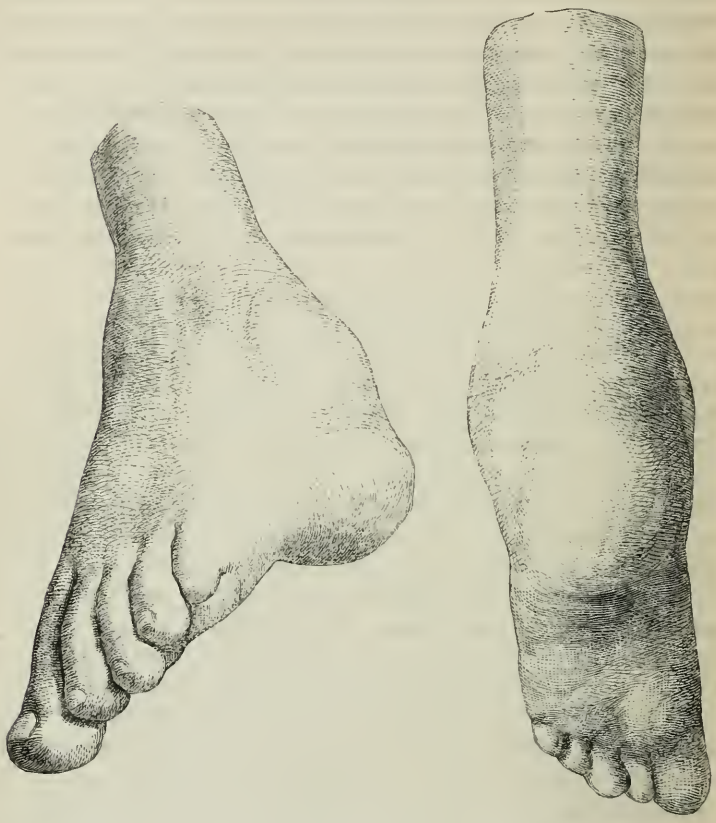
The ankle was so greatly enlarged that the normal form was entirely lost; there was also considerable bulging of the soft parts, generally, around, and an indistinct fluctuation might be felt. The joint was so

* On the Excision of Joints, by Richard M. Hodges, M.D., p. 123.

† On Diseases of the Joints, p. 444.

loose as to admit of movement in every direction. The measurements of the part as compared with the opposite ankle were—the size of the

Woodcut 36.



lower third of the tibiæ and fibulæ alike; around the malleoli—sound, nine inches and three-quarters; affected side, twelve inches and a-half; from upper edge of the tibio-astragaloid articulation to the point of the heel, twelve inches in sound limb, and fourteen inches in the affected one; around the arch of the foot, nine inches sound side, nine and a-half the affected one.

He does not complain of any pain; there are no startings of the limb; he eats and sleeps well.

Since his admission the whole limb has been kept perfectly at rest,

and various forms of counter-irritation applied over the joint; good diet and mineral tonics have been administered; but no appreciable change has been observed in the malady.

On 1st of February, Mr. Canton removed the parts constituting the ankle-joint. An incision was made through the skin only, from about two inches above and behind the external malleolus across the instep to the same distance above and behind the internal malleolus; reflecting a flap upwards, the peronei tendons were dissected from out of their groove, and the external lateral ligament was then cut through; the fibula was next divided by bone-nippers, and removed at about an inch and a-quarter above its lower extremity. Turning the foot on its outer side, the tendons of the tibialis posticus and flexor digitorum communis were detached from behind their malleolus, and the internal lateral ligament divided; the sole of the foot was then turned forcibly outwards, and the lower end of the tibia thereby forced through the wound. This latter part was now sawn off, as was also the whole of the articulatory portion of the astragalus. No vessels required ligature. The parts were then carefully adjusted and a few sutures employed.

The patient at the time of this report was doing well.

The parts exhibited showed the usual appearances of strumous ostitis. The whole of the cartilage covering the articulatory surface of the astragalus had, in the progress of the disease, become completely separated and come away, free from the bone, during the operation. It was in a natural condition; partially detached also was the incrusting cartilage of the lower end of the tibia, and it was likewise free from disease. Mr. Edwin Canton, *17th of March*, 1863.

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14. *Portions of the jaw-bones, which exfoliated in a case of cancrum oris, perforating the cheek; exhibited together with a photograph of the patient's face after recovery.*

The patient was a female child, æt. 6, who was admitted into the Hospital for Sick Children, under Mr. Holmes's care, on the 15th of October, 1862. She had been sickly and delicate for some time past, but no distinct attack of disease was mentioned. It was said that three weeks before her admission she was noticed to have a slight swelling and soreness about the left cheek, and about ten days before admission this had so far increased that she could hardly open her mouth, the cheek was more swollen, and of a bright-red colour. The saliva was dirty and very offensive. She managed to swallow well all the time.

A black spot was noticed on the cheek a few days afterwards, and this resulted in a hole through the cheek near the left angle of the mouth. On admission she was in a state of great depression, the hole into the mouth was as large as a sixpence, surrounded by a circular band of slough, around which the cheek was thick, red, and brawny. The inside of the cheek was seen to be of a dirty brownish-yellow colour, and looked sloughy. The gums and teeth of both jaws near the opening were also sloughing. The fœtor was horrible. There was swelling of the glands and profuse fœtid salivation. The pulse was 160, very feeble. The parts were immediately cauterised very freely with strong Nitric Acid, a lotion of Chlorate of Potash and Biborate of Soda was used to clean the mouth, a stimulant tonic with Chlorate of Potash was given, and wine and liberal diet ordered. It is unnecessary to dwell on the progress of the case. The child began to improve steadily from the time of her admission. The slough did not extend after the cauterisation; but on its separating a very large hole was left into the mouth. This was completely circular, and as large as a shilling, separated from the edge of the lip by a bridge of red mucous membrane, &c., about a quarter of an inch in breadth, and extending down nearly to the base of the jaw. The finger could be passed through into the mouth without giving her the least inconvenience. The jaws in the neighbourhood of the opening were necrosed, and the discharge around them rather foul. After the edges had become clean, the opening began rapidly to contract; but its lower part was so closely adherent to the jaw that it was feared it could not entirely close, or at least not without much deformity. This fear proved imaginary. The opening closed rapidly and completely, leaving no unnatural appearance, except a slight puckered depression where the parts adhered to the lower jaw. On the 6th of December the necrosed portion of the upper jaw, which had become loose, was drawn out of the mouth. It involved the alveoli behind the first bicuspid tooth, and the sacs of two permanent molar teeth with the teeth in them were also comprised in it. The sequestrum of the lower jaw, which was more extensive, was still immoveable. The child was threatened with a recurrence of inflammation about the cheek during the month of January, and there was redness and swelling of the ankles, but under appropriate treatment these symptoms subsided. As the dead bone still remained fixed, she was sent into the country for a month, and returned on the 10th of March. The dead portion of the lower jaw was now found to be separating. It was removed with an elevator, and a pair of strong forceps, and included, besides the sacs of

the back teeth, the opening of the dental canal, a part of the ramus of the bone below it, and a small portion of the ascending ramus. The continuity of the jaw was, however, maintained by a strong portion of the horizontal ramus. The child was now discharged perfectly well.

Gangrenous stomatitis is a complaint so generally fatal when the gangrene has extended through the whole thickness of the cheek, that we have but few opportunities of seeing how powerful are the resources of nature in healing the disease. I have thought, therefore, that this case, which affords so striking an instance of the fact, would not be unworthy of the Society's attention. It must, however, be observed that this fortunate result was due to the circumstance that the sloughing was checked before it had extended through the red margin of the lip. When this is not the case, the edges of the sore left by the separation of the slough will adhere all round to the bones and cicatrix, leaving an irregular cavity extending from the corner of the mouth. This horrible deformity can then only be remedied by the transplantation of the neighbouring soft parts. A case of this nature was under Mr. Tatum's care, at St. George's Hospital, some years ago.* This consideration gives additional weight to the other motives for arresting the gangrene if possible before it has reached the edge of the lip. If the application of the nitric acid had not been successful in this case, I was prepared to have made trial of the actual cautery, so strongly recommended by the high authority of Professor Trousseau; but I must say, that as far as the present experience of the Hospital for Sick Children enables me to judge, the strong mineral acids (which are so much more easily obtained and applied, especially in private practice) answer all the indications as well as can rationally be expected.

A case in the Society's Transactions, Vol. VII., p. 284, affords an interesting example of the amount of bone which may be lost in this disease without much impairment of function. Here, however, the deformity of the external parts is said by Mr. Birkett to have required "the assistance of a little plastic surgery."

Mr. Holmes, 17*th of March*, 1863.

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15. *Disease of the posterior calcaneo-astragaloid joint.*

Mr. Partridge exhibited a specimen of disease of the posterior calcaneo-astragaloid joint, in which the articular surfaces of the bones

* An instance of great contraction of the orifice of the mouth, following on cancrum oris, is recorded in the first volume of the Society's "Transactions," p. 88.

were rough and entirely denuded of their cartilages. The interosseous calcaneo-astragaloid ligament was entire. There was superficial caries of the under grooved surface of the sustentaculum tali, and the pus from the diseased joint had found its way into the sheath of the flexor longus pollicis, and had pointed above and behind the internal malleolus.

The disease had its origin in a fall, and sprain of the foot, while the patient (a middle-aged man) was walking up hill twelve months previously. Mr. PARTRIDGE, *17th of March*, 1863.

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16. *Case of exfoliation of the entire thickness of a small portion of the left parietal bone.*

The patient who was shown to the Society on the 7th of April is now 57 years of age. She has been twice married. When twenty-four years of age she contracted syphilis from her first husband. She suffered very severely from it at that time. It is extremely probable that the case was treated with mercury, but the patient has no recollection of having been salivated. She recovered, and was tolerably healthy, till about ten years ago she began to suffer from a succession of abscesses from suppuration of the glands in the neck and axillæ.

Just five years ago an abscess formed in the scalp, over the centre of the left parietal bone. It was allowed to take its own course, and was nearly three months in opening. The wound in the scalp could not be got to close, and at length, about three years ago, the medical attendant discovered that a pulsatile movement was communicated to the discharge when that was allowed to collect in the scalp-wound. It was then found that there existed a communication with the surface of the *dura mater*. A minute exfoliation, comprising the entire thickness of a point near the centre of the parietal bone, had evidently been thrown off.

The pulsatile movement communicated to the brain by its circulation is thus transmitted to the collection of pus, which rests directly upon the *dura mater*, fills the opening in the bone, and presents a surface of about a-quarter of an inch in diameter, in the external scalp-wound. The pulsation is therefore plainly visible to the naked eye, and the case is valuable as affording this indirect means of watching the circulation of the brain.

When the patient is excited, as for example, when she was relating to me the history of her case, the discharge wells up through the open-

ing in the bone, in increased quantity. This appears to show that matter collects between the *dura mater* and the bone, and that during a period of excitement the actual volume of blood sent to, or attracted by, the brain, is increased. Mere increase in the rapidity of the circulation would not produce the effect observed.

The case is also interesting as affording a means of watching the state of the cerebral circulation during sleep. The patient is, however, extremely wakeful and nervous, and no satisfactory observations during sleep have yet been obtained. Mr. Pearson, *7th of April*, 1863.

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17. *Excision of the astragalus and scaphoid bone.*

R. T., æt. 9, was admitted into the Hospital for Sick Children, on 2nd of March, 1863, on account of disease of the right foot, of some years' duration, and referred to an injury received at that time. The ankle soon became swollen and very painful, and she had been lame ever since. Four years previously she had been in St. Bartholomew's Hospital for two months, but did not derive any benefit. There had been discharge from the part for more than five years, and the parts around were much thickened and indurated. The patient could hop about on crutches, and could bear to put the foot to the ground for a short time. She was of a strumous and cachectic appearance, and was said to have been gradually losing flesh. Examination of the chest gave no precise indication of disease.

The swelling was chiefly confined to the inner aspect of the foot. The ankle-joint appeared perfectly sound, as the malleoli were easily made out and felt natural; and motion of the ankle, though limited, produced little, if any, pain. The probe passed down from two or three sinuses which existed on the inner side and dorsum of the foot, to a large surface apparently of roughened and carious bone, and it was thought that the astragalo-scaphoid articulation was the chief seat of mischief. Mr. Holmes determined to cut down on the diseased bone, with a view to remove whatever was diseased. The opinion which was entertained before the operation was that the disease was limited to the astragalus, but that that bone was extensively affected, and that the best course would be to remove it entire. At the same time, it was believed possible that the disease might be found to affect other bones, so that amputation might be indicated. Hence the first incision was so made as to allow of Syme's amputation being performed, if necessary. A flap was accordingly formed from the dorsum

of the foot by dividing all the tendons and the anterior tibial vessels and nerve, as in Syme's amputation. The point of the astragalus was thus exposed, and presented a roughened cavity. In this cavity a sequestrum was really contained, which was the source of the whole mischief; but this was not recognised at the operation, as the loose and necrosed piece of bone was jammed into the cavity, so as not to be at all moveable, and felt roughened and soft like all the rest of the walls of the latter. Accordingly, the dissection was continued backwards towards the ankle, in order to search for the limit of the disease; but the roughened cavity extended up to, if not into, the ankle; and in exposing it the joint was opened from one side to the other. It looked healthy. Anteriorly the disease extended up to, but not beyond, the next joint. Under these circumstances, with the ankle-joint freely opened, and with what seemed a mass of disease extending throughout the whole of the head and neck of the astragalus, it was thought a more prudent course to dissect out the whole of the latter bone than to divide the neck of it, and remove the diseased mass. This was done without any extraordinary difficulty. The ligaments of the anterior joint were first divided, so as to expose in its whole extent the rounded head; which, however, was now found to be that of the scaphoid, not the astragalus; since the posterior faces of the three cuneiform bones came into view. Next, the lateral ligaments of the ankle-joint were freely divided, and the bone lifted up with the lion-forceps, and carefully dissected on its lower side, so as to divide the ligaments between it and the os calcis. Care was now taken in separating the parts at the back, to avoid wounding the posterior tibial artery, the dissection being conducted from the outside on to the flexor longus pollicis tendon, after which had been exposed, the bone was pulled away. Very little blood was lost. On examining the bone after removal, the nature of the case was clear. The astragalus and scaphoid were so firmly soldered together that no trace of the line of union existed. A sequestrum, which might have been originally the head of the astragalus, was lying in it, and was removed without much difficulty. The walls of the cavity left on its removal were rough, but the softening extended only a very short distance. Consequently, if the sequestrum had been detected and removed, there is every reason to think that the cavity would have filled up.

The case progressed uninterruptedly well; but the cavity was some time in filling up. When the preparation was exhibited, on the 19th of May, the wound was very nearly closed, and the child could walk a

little, and could even, when supported, stand on the foot operated on, without pain; but if she used the foot too much at any time, pain and increased discharge would compel her to leave off.

She was soon afterwards sent to Margate Infirmary. The preparation was exhibited as being, it was thought, an interesting specimen of a complaint not very often spoken of, viz., limited necrosis of a portion of the tarsus. Strumous caries is so much more common in this part of the body; the history was so much that of a case of strumous disease, and the sensation of the bone under the probe was also so perfectly that of extensive caries, that the idea of a sequestrum being at the bottom of the whole disease did not occur to any of those who saw this patient; nor, unfortunately, was the sequestrum recognisable at the time of the operation. Consequently, the excision of the whole of the bone affected was decided upon—it being the opinion of the writer that many more cases of strumous caries of the tarsus would be cured without amputation if, while the disease is still limited, the whole bone or bones affected were removed, as far as the nearest healthy cartilaginous surface. Mr. T. Holmes, *19th of May*, 1863.

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18. *Two cases of excision of the head of the humerus.*

Mr. Holmes exhibited the heads of two humeri, which he had removed on the same day at St. George's Hospital, from patients labouring under disease of the shoulder-joint. The cases presented a certain similarity, but offered some points of contrast. The first case was that of a young man, æt. 25, who referred the disease to a blow received on the part about ten months before; but there was an obscure history of affection of that shoulder after a previous rheumatic attack. There was intense pain in the part, causing weakness and loss of health, an abscess was discharging in the axilla, from which a long sinus led up towards the acromion process, and on making an incision in a convenient situation into this sinus, the finger could be easily passed into the joint, and the head of the bone felt to be exposed and rough. He was otherwise in good health, and anxious for the removal of the disease. The operation was performed, on the 7th of May, by the straight incision. No care was taken to avoid the long tendon of the biceps, and it was no doubt divided. Not much blood was lost; the patient did very well after the operation, left his bed in less than a week, and felt greatly relieved in consequence of the cessation of the pain. A future opportunity will be taken of recording the success of this operation.

The other preparation was removed from a man, about 35 years of age, an agricultural labourer, of sallow, unhealthy appearance, who had long suffered from rheumatic pain about the right shoulder, and from whose shoulder some necrosed bone had been removed, comprisng the acromion and end of the spine of the scapula, a few months before. At that time the shoulder-joint did not appear to be diseased, but on his presenting himself again at the Hospital, there was evident grating, when the articular surfaces were moved on each other, and an incision having been made in a convenient situation, the whole of the head of the humerus and the glenoid cavity of the scapula could be felt exposed and rough.

In this case, in order to procure a free access to the parts, a large flap was made of the deltoid muscle. The posterior circumflex artery bled freely, but was easily tied. Not very much blood was lost. The whole upper end of the humerus was removed, the section being carried just below the tuberosities. All above was superficially ulcerated. The glenoid cavity was also the seat of superficial ulceration, and was carefully chiselled until a smooth and healthy surface of bone was left. The flap was then adjusted by sutures. Nothing could be better than the progress of the wound, but the patient was dull, dispirited, and oppressed. He left his bed about a week after the operation, but did not feel comfortable, and soon returned to bed again. On the eighteenth day after the operation he began to complain of pain in the head, and on the twentieth day was seized with severe epileptic convulsions, passing into coma, of which he died. No distinct explanation of these symptoms was discovered on the *post-mortem* examination, but as the parts concerned in the operation were preserved, they will be exhibited at a future meeting of the Society; so that a description of these parts will in all probability be found in the next volume of the Society's "Transactions," where a fuller account of the case will also be given.

Mr. T. Holmes, *19th of May*, 1863.

VII.—DISEASES, ETC., OF THE ORGANS OF SPECIAL SENSE.

1. *Black cataract.*

M. B., æt. 61, a weakly, nervous woman, applied at the Central London Ophthalmic Hospital with cataracts in both eyes. The sight

of the left eye had been gradually growing dim for some twelve years; it then rather suddenly failed, and, to use the patient's own words, "it went with red specks, and it seemed to her as though she always had a red currant before her eye." The pupil of this eye showed an irregular whitish-grey area, with marks of a more milk-white character on the surface of the lens, apparently due to calcareous deposit. The perception of light was but very slight; the pupil dilated under atropia regularly, but acted sluggishly. In the right eye was a cataract of the ordinary senile character; with this eye the patient could find her way about tolerably well. The left eye was operated on by extraction by the superior section. The grating of the needle in opening the capsule of the lens was very marked, and when the lens was extracted it appeared of the full size, with a deeply maroon-coloured hard nucleus, almost black in the centre, and surrounded with much soft white matter, with calcareous deposit on its surface.

The section healed but slowly with a small prolapse of the iris upwards, sufficient, however, to prevent a good ophthalmoscopic view of the fundus. The operation has improved her condition as far as vision is concerned, but she can hardly make out No. 18 with a two-and a-half convex lens.

Dr. Harley has kindly analyzed the lens for me, and I append his note which bears out the observation of von Graefe, as to the presence of iron being the cause of the colour in the lens, due probably to blood-effusion from some part of the fundus of the eye.

"The specimen is preserved in glycerine. The colour appears to be chiefly confined to the interior. On removing some of the external scales, they are seen to be of a pale brown colour. When a section is made through the central mass, it looks almost black; in some places it seems to be uniformly distributed in the fibres, giving them a yellow hue; at other places it looks as if collected into granular masses.

"When pure hydrochloric acid and sulpho-cyanide of potassium are added to a section under the microscope, the tissue or fibres become red, showing that the pigment is chiefly iron. When pure hydrochloric acid and ferro-cyanide of potassium are added, the masses of pigment become rapidly blue, and the colour gradually diffuses itself through the tissue, showing that iron is present in considerable quantity. The fibres are a little altered in appearance from the normal lens-fibres, the serrated edges not being so distinct."

Mr. Hulme, *20th of January*, 1863.

2. Petrous bones, from a case of typhoid.

The petrous bones of a young woman, æt. 24, who died from typhoid fever, in its early stage. She was admitted for iritis of a syphilitic character, and became ill, and died soon after her admission. The characteristic lesions of typhoid were found after death.

Right ear.—The meatus contained masses of softened epidermis. The membrana tympani presented some congested vessels on its surface. The superior wall of the tympanum was of a dark colour, and when cut into its cancellous structure was found to contain a bloody fluid. The cavity of the tympanum contained a grumous fluid of dark grey colour, resembling unhealthy pus. The lining membrane was red and softened. The base of the stapes, on its vestibular aspect, was distinguished by its red colour.

Left ear.—The tympanum was full of a similar fluid; but there was no infiltration of its superior wall, which was very thin and in parts almost deficient. The external meatus was healthy. The membrana tympani at its upper part bulged before the fluid, the colour of which was very visible through it.

On each side the Eustachian tube was closed by thickening of its lining membrane. The labyrinth presented no appearance of disease.

The patient had been married eighteen months. She had no children. Her husband said that she had heard well until her admission into the Hospital. The specimens probably exhibit in an early stage one of the causes of deafness after fever.

Mr. Hinton, *5th of May*, 1863.

VIII.—TUMOURS, CYSTS, ETC.

1. Malignant growth, from occipital bone.

The patient, a man æt. 60, a brick-maker, was admitted into St. Mary's Hospital, under the care of Mr. Coulson, on the 15th of July, 1862. He had previously been for some time treated as an out-patient by Dr. Sieveking and Mr. James Lane.

In September, 1861, he noticed a swelling on the back of the head, which he attributed to a blow received some time before. It had slowly increased, and when he came under observation formed a fluctuating tumour about the size of a pullet's-egg, and in its most prominent

part a circular piece of loose bone could be detected, elevated considerably above the level of the surrounding bone. A grooved needle being introduced gave exit to pus.

On admission, the tumour was tense and painful, and a few days afterwards, Mr. Coulson made an incision into it about an inch in length, and much pus and a little blood escaped. This gave partial relief, but on the 25th there was more pain, and increased tumefaction was observed above the opening.

On the 28th the pain had greatly increased, and three or four fragments of dead bone were removed under chloroform. A week after this operation another small piece of bone came away, but exposed bone was still visible in the wound. On the 15th of August, other small pieces of bone were thrown off, and a small abscess on the top of the head was opened. On the 18th he had a severe attack of erysipelas, from which he did not thoroughly recover till the end of August. The wounds continued to discharge, but had now a much more unhealthy appearance; the general swelling produced by the erysipelas having subsided, the tumour round the opening was seen to have increased, and a fungous mass protruded from the wound itself. During the month of September this increased in size but not rapidly, the patient lost strength, but there were no head symptoms. A probe passed into the centre of the wound met only with soft structures; and an indistinct diffused pulsation, communicated from the membranes of the brain, showed that the inner table of the skull was destroyed.

On the 7th of October, about a week before death, profuse hæmorrhage took place; this was arrested quickly by the tincture of the sesquichloride of iron, but it recurred several times. He became much weaker, was delirious on the 12th, comatose on the 14th, and died in this condition on the 15th of October.

At the *post-mortem* examination, a large fungous mass was found projecting from about the centre of the occipital bone. The whole of the posterior part of the arch of the cranium was removed, from the foramen magnum to a point an inch in front of the apex of the lambdoidal suture, so as to include the entire disease. The brain appeared healthy, and the inner surface of the dura mater was perfectly smooth and free from any unusual vascularity, though at the situation of the internal occipital spine it was pushed in considerably by the tumour in contact with its cranial surface, and the diseased structure was firmly adherent to it. It did not, however, spring from it, but from the diploë of the bone. The inner table was destroyed for a space of three inches by two,

and beyond this was thinned and discoloured, and at one or two points was perforated by processes of diseased structure. The outer table had disappeared to a greater extent, and at the margin was raised from the inner, the fungous matter sprouting from the interval between them.

On microscopic examination, the tumour was found to consist entirely of cells of large size, with distinct nuclei, spheroidal in form, and showing no tendency to development into fibre. In some, two or more nuclei could be seen, and not unfrequently a number of cells were collected into a spherical mass, and surrounded by a distinct capsule. Cells of the same character were found in the diploë near the tumour, but where the tables were not attached.

The lungs were highly œdematous, and at the posterior part of the lower lobe of the left were several pale soft tubera, or flattened elevations, one of considerable size. When cut into they were found to be almost fluid in consistence; they were not surrounded by any inflammatory areola, and the matter from them yielded cells resembling those found in the tumour on the head.

The remaining organs were comparatively healthy, and free from any similar deposit.

There can be little doubt as to the malignant character of this disease, or as to its origin in the diploë. The resemblance of the matter first evacuated to healthy pus, the elevation of the detached portion of the external table, and the slight invasion of the dura mater, constitute interesting points in the case.

Dr. Broadbent, 21*st of October*, 1862.

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2. *Fibrous tumour of the upper jaw, removed by excision.*

The patient, an unmarried female, æt. 26, had always enjoyed good health, and menstruated regularly; she seemed to have no hereditary predisposition to malignant disease.

The history of the tumour is, that three years ago there appeared a swelling of the gum and cheek. It was referred to toothache, and was so regarded by a surgeon whom she consulted, and who removed one, either a bicuspid or a molar. The swelling of the gum (which had burst before the tooth was extracted) did not, however, subside, but gradually, during the intervening period, increased to its present size, being all the while free from pain.

On examination, a tumour was found occupying and involving the greater part of the left superior maxillary bone and bulging the cheek.

The outline was globular and slightly irregular, protruding in the situation of the antrum outwards, nearly an inch beyond the alveolar margin, and inwards along the palatal surface, which was also bulged almost to the median line. It extended also into the nostril, and anteriorly as far as the sockets of the incisor teeth, terminating distinctly behind at the spheno-maxillary fissure. The lower or alveolar border was slightly ulcerated where teeth had existed, otherwise the soft parts and the adjacent absorbents appeared free from contamination. The tumour was very firm and solid, without any perceptible point of softening.

On the 29th of June, I removed the disease by operation. The only integumental incision of the face being from the nostril into the median line of the lip. The operation was accomplished without removing the orbital plate of the superior maxillary bone.

The progress of the patient subsequent to the operation was very satisfactory, she being able to return home to her friends at the end of ten days, with very little disfigurement beyond a slight hollowness of the cheek, requiring a critical examination to detect that so severe an operation had been performed.

Examined by my colleague, Mr. Hulme, the tumour presents the following histological characters :—

It is the size of a turkey's-egg, involving and infiltrating the greater part of the left superior maxillary bone, and extending upwards into the antrum, the upper and posterior surface having a nodulated or mammillated appearance, its anterior portion being marked by the under surface of the orbital plate. On section, the structure of the tumour appears of a dense homogeneous, somewhat fibro-cartilaginous-looking substance, encased by a thin shell of bone sending processes into the interior, which consists of a hard bony mass, having a radiating appearance, the fang of a molar tooth being imbedded in its substance. The upper mammillated surface is soft and free in the antrum covering the central bony structure on its surface.

Microscopically, the softer parts consist of elongated cells, having a tendency to form fibre, a tendency especially evident at the thin edge of a section, which shows the fibroid cells very clearly, their nuclei being rendered evident on the addition of dilute acetic acid. Calcareous matter is deposited along the course of the fibres, and the central hard portion of the growth consists of an infiltration of earthy salts, converting it into a stony mass. The tumour may thus be regarded as a fibrous growth undergoing calcareous degeneration.

I am indebted to my friend Mr. Haldan of Preston, Lancashire, for

the foregoing case, who kindly submitted the patient to my judgment, during a professional visit to that town in June last.

Mr. T. Carr Jackson, *4th of November*, 1862.

3. *A series of recurrent fibroid tumours, from the same patient.*

The first of this series of specimens was the upper arm and stump of the forearm, with a tumour situated immediately above the internal condyle. The others were separate tumours removed subsequently, as detailed in the following history of the young woman from whom they were taken.

E. L., æt. 17, was admitted into the Westminster Hospital under Mr. Holt, on the 21st of January, 1861. The patient, who is a strong, healthy-looking girl, states that about eight years ago she first noticed a small hard tumour between the first and second metacarpal bones of the right hand, which caused very little pain, and no inconvenience. It continued slowly to increase for about three years, when it attained the size of a pullet's-egg. It was still hard, and the pain of a sharp, shooting character. It was then removed by Mr. Savory at the East Sussex Infirmary. The wound healed up in seven weeks; but she could never completely shut her hand afterwards. About a month after this the hand became very much swollen, and rapidly increased in size; it was poulticed, and ultimately burst, when blood came from it, and continued to escape at intervals. Mortification came on, and about six months from the first appearance of the swelling, amputation was performed about midway between the elbow and wrist. The wound healed up in five weeks.

About four years after the forearm was amputated, a small, hard swelling, about the size of an almond, appeared about two inches above the inner side of the elbow-joint; it was not painful, but continued to enlarge up to the time when she was admitted into the Westminster Hospital. On her admission, a tumour, of the size of a large orange, was observed, situated a little above, and to the inner side of the elbow-joint, and encroaching somewhat upon the space in front of the bend of the elbow. It was extremely hard and immoveable, being apparently closely connected with the bone, and she complained of a great deal of pain in the part. It continued to increase rapidly, the skin over the tumour becoming tense, red, and shining; and taking all the circumstances of the return and rapid growth of the disease into consideration, Mr. Holt decided upon amputating at the shoulder-joint, as affording

the patient the best chance of immunity. The operation was performed on the 29th of January, under the influence of chloroform.

Examination of tumour :—On a careful dissection, the internal cutaneous nerve was found to be partly stretched over and partly involved in the growth, which had exerted pressure also upon the brachial vessels and nerves, but not to any serious extent. On section, the tumour presented the appearance of a fibroid growth, and was found to be unconnected with either bone or periosteum, a few muscular fibres distinctly separating it from them. On microscopic examination, the fibroid character of the growth was found to be very distinctly marked, and it may, therefore, be considered as an example of the recurrent fibroid tumour, and apparently occupying the position of the lymphatic gland, which is found immediately above the internal condyle. Unfortunately no reliable information as to the minute characters of the former growths can be obtained.

The patient continued perfectly well until the middle of April, 1862 (fifteen months after the amputation), when a tumour appeared in the axilla immediately beneath the cicatrix, and began to enlarge with great rapidity, the skin over it becoming red, and being apparently on the point of giving way. The tumour gave rise to an aching pain, no doubt due to pressure upon the brachial nerves.

On the 13th of May Mr. Holt removed the tumour, together with the portion of skin involved with it; the growth was readily dissected out, without giving rise to any hæmorrhage; but there appeared to be a small portion more deeply situated, upon cutting into which it became evident that the artery was divided, the hæmorrhage being free for a moment, when it was controlled by pressure until it could be secured with a ligature. The edges of the wound were brought as nearly into apposition as possible, though there was necessarily only a scant supply of skin; and water dressing was applied.

The tumour (the second exhibited), which was as large as an orange, but of irregular shape, presented much the same features as the former growth, except that the tissue was a little softer and the fibrous element not so strongly marked. The smaller portion last removed, though closely resembling the other in external appearance, proved to be only the matted and enlarged extremities of the nerves with a piece of artery in the centre.

After the operation the patient did not have a bad symptom. The wound healed partly by first intention, and partly by granulation. She was discharged to return to Hastings on the 3rd of June. A little

aching pain about the right breast was complained of, and she said she felt convinced that the growth would return.

In October the patient perceived a fresh growth near the former cicatrix, which increased rapidly, and she was again admitted into the Hospital, where the tumour was extirpated by Mr. Holt on the 28th of October, 1862. Being of softer texture than the last, and some of it lying beneath the pectoral muscle it was removed in four pieces, which were exhibited to the Society.

Within a fortnight of this operation another tumour (the sixth from the commencement) was perceived on the pectoral muscle, and this was removed by Mr. Holt on the day it was exhibited to the Society, the 18th of November, 1862.

The tumour, of the size of a goose-egg, differed from all the others in having a cyst in close connection with it, the superficial part of the tumour being covered by the cyst-wall, which projected into the pectoral muscle for a short distance, but had been entirely removed by ablation of a portion of its fibres. The tumour was much softer in consistence than the former ones, presenting less of a fibrous, and more of a medullary character. On microscopic examination, however, the fibrous element was distinctly visible, but a large quantity of milky juice was present in which nucleated cells and nuclei were visible, though nothing essentially characteristic of cancer could be discovered.

It will thus be seen that this interesting series of tumours presents a well-marked example of recurrent disease apparently assuming a more malignant character at every fresh appearance.

Mr. Christopher Heath, *18th of November*, 1862.

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4. *Subcutaneous cancer, secondary to cancer of the glans penis.*

An agricultural labourer, æt. 70 years, who had all his life enjoyed robust health, came into St. George's Hospital in January, 1862, in consequence of a number of little nodules that had appeared under his skin. It seemed that he had noticed the first of them three months before, in the left groin. This soon afterwards ulcerated and disappeared, leaving an open sore. A similar series of changes took place in the right groin. During the three weeks preceding his admission, a number of hard, irregular lumps, mostly about the size of a nut, appeared under the skin on different places. On admission, a number of these tumours could be seen over many parts of the body. They were numerous all over the trunk, particularly on the sides of the thorax and over

the axillæ. A good many lay about the umbilicus. These were most numerous wherever absorbent glands existed. Many occupied both groins, and the inside of the thighs at their upper parts. The skin was readily moveable over the growths, and had over most of them a congested or purplish colour. The masses were painful when pressed. The man had a natural aspect. His chief complaint was of rapidly increasing weakness, and he also had a short hacking cough. Without the occurrence of any fresh symptom, he gradually sank, and died a fortnight after his admission.

On examination of the body, the numerous enlarged glands in the groins, and a sharply excavated ulcer on the inside of the right thigh, at once suggested an inspection of the penis. Under the prepuce, and concealed by it, was found a considerable amount of malignant disease. The prepuce was lined, and the glans was covered, with a rough incrustation of epithelial cancer, which the microscope showed to consist of spindle-shaped and flattened cells, such as belong to that growth.

The body was covered, as had been seen during life, with hemispherical prominences. These were found to occupy the subcutaneous areolar tissue; some were in the situation of absorbent glands, others were found where these organs did not exist. The tumours were of about the size of nuts; the skin was loose over them. On section, they had all the characters of encephaloid; and under the microscope, the cells were of the rounded variety found in tumours of that nature.

The brain was found to be surrounded by a considerable quantity of sub-arachnoid fluid, and the tissue was generally wet; in other particulars it was natural.

The lungs were natural, but the right pleura contained a considerable quantity of fluid.

Upon the anterior surface of the heart was a nodule of malignant disease. This exposed a surface about as large as a sixpence, which was surrounded by a belt of vascularity. The nodule penetrated a little way into the muscular substance. It had the appearance of having commenced immediately under the pericardium. Examined with the microscope, the characters of the growth were chiefly such as belong to encephaloid, but some flattened cells were intermixed more like the epithelial variety.

The bronchial glands were much enlarged.

There was a large nodule of similar appearance in the liver, and another in the spleen. The glands of the mesentery and great omentum were all infiltrated with the same deposit. A number of small cancerous

nodules were attached to the outside of the bladder, which seemed to have grown from the serous coat. Some similar growths were connected with the capsule of the kidney, and projected into the surrounding fat. The lumbar glands were enlarged.

The subcutaneous variety of cancer is uncommon, although by no means unknown. The present case is a good example of the rule that cancer is conveyed by the absorbents, not by the blood-vessels. The formations of cancer, which are secondary to one previously existing, appear to be entirely regulated as to their situations by the course of the absorbents; while they are quite independent of the direction of the veins. It might be inferred from what has been proved as to the independent life of the cancer-cell, that these bodies are taken up by the absorbents and deposited as seeds in the glands and organs traversed. I have, however, repeatedly examined the thoracic duct in cases of this nature, and never could find anything abnormal either in the canal itself or its contents, and I have been almost led to believe that the cells are not taken up as such, but rather that fluid poison is conveyed. Still it must be allowed from many well-known facts, that solid matters can be taken up by this system of vessels, and deposited in the glands. Insoluble colouring-matter, after tattooing, has been thus conveyed. Whether by means of the cells themselves or not, there can be no doubt that the disease is carried from its original seat by these ducts, and not by the blood-vessels. It seems, moreover, that wherever the absorbents go, there malignant disease is particularly apt to develop itself. If the lung be the organ affected, the depositions will most often begin immediately under the pleura, or if not there, in the areolar tissue surrounding the bronchial tubes. If the heart, it will start just under the pericardium. If the liver, under the capsule. The same with the kidney. The subserous tissue generally may be described as the situation in which the abdominal and thoracic viscera are most often first affected. Allowing that malignant growths are chiefly propagated by the absorbing power of the lymphatics, it is easy to see why such growths should appear in the course of these channels, between the original tumour and the thoracic duct; but it remains for future observations to show whether the subsequent development of the disease in remote parts of the body, in the position of the absorbents, depends upon some connection between this system of vessels and the disease, or is merely the result of an independent coincidence.

Dr. Dickinson, *3rd of February*, 1863.

5. *Encephaloid carcinomatous tumour of orbit removed without loss of blood.*

E. M., æt. 6, became the subject of a tumour of the right orbit, which extruded the eyeball, in August, 1862. In September, the tumour and globe were removed in the Maidstone Hospital; but the patient had scarcely recovered from the operation, when a secondary growth appeared at the orbit, and now (January 16th), on admission into the London Hospital, is of the size of the fœtal head, concealing one cheek, the nose, and one-half the mouth. It bleeds constantly from the anterior surface, and the child is very ex-sanguine. It was deemed desirable to remove the unsightly mass, and to prevent further hæmorrhage, and this was all that art could be expected to effect. The vitality of the tumour was destroyed by the introduction of pencils of chloride of zinc and flour dried hard, in various directions at the base of the swelling. On the tenth day the mass becoming dry, and no bleeding having occurred for three days, the tumour was forcibly torn from its position, with the loss of not more than a tablespoonful of blood from one or two points in the orbit. The pedicle was then carefully destroyed with the actual cautery, and the child left the Hospital on the 6th of February with a granulating wound occupying the original site of the tumour.

Mr. Maunder, *3rd of February*, 1863.

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6. *Fatty tumour on sole of foot.*

M. F., æt. 7 months. When born this child had a small tumour on the sole of the foot. An attempt was made to get rid of it by extirpation, when the child was a very few weeks old. The wound made bled profusely, the parents informed me. For a time the foot appeared quite free, but the growth returned, grew very rapidly, and, when I saw it, had attained the size of an orange. It appeared pendant from the foot, having a slightly-defined neck, which extended from just behind the fissures of the toes almost to the heel, and was even, on either side, with the edge of the foot. The surface of the growth was uneven, or lobluated; the colour of the skin of a dusky purple, deeper in shade in some parts than in others, evidently associated with the tufts of minute vessels which radiated through it. There were no large vessels observed running over the growth. It was elastic to the touch, and had some movement, but it was hard to determine how its base was situated in reference to the deep-seated parts. There was, however, movement in the toes. The child did not suffer pain, but it was feeble and very pallid.

After consulting several friends, and inclining to the belief that the tumour was of a *recurrent*, if not of a decidedly *malignant*, nature; and, moreover, that the removal of the tumour would be a severe operation for so young and feeble a child to undergo, I advised amputation of the front of the foot, and with Mr. Lawson's, Mr. H. Smith's, and Mr. Worley's assistance, performed that operation, with division of the tendo achillis, on the 12th of February. The child made a rapid recovery.

On examining the tumour, it was found to be composed of large meshes of connective tissue, in which were contained fat cells, with margaric acid crystals in the interior of each. The tumour was free of the deep tissues of the foot, and could have been dissected from the skin. As it was submitted to Dr. Harley for dissection and further examination, I leave other details for that gentleman's report.

Mr. Gay, *17th of February*, 1863.

Report on the above specimen.—The specimen received for report consists of the anterior portion of a child's foot, removed at the articulation of the scaphoid, with the cuneiform bones. Attached to the sole of the foot is a large subcutaneous tumour, (Plate X., Fig. 1), about the size of an ordinary apple; extending from the root of the toes, in front, to the line of operation behind; it is as broad as the foot across the toes.

Measurement of tumour:—

Diameter of section	2	inches.
Measurement over tumour from before backwards	$5\frac{1}{4}$	,,
Measurement over tumour from side to side	$4\frac{1}{2}$	,,

The tumour feels firm and semi-elastic to the touch, with two or three harder nodules over its surface. On making a section of the tumour from before backwards, it is found to be attached by a smooth well-defined nodulated base, to the sheaths of the flexor tendons of the toes, and to the lumbricales muscles. Anteriorly, the base seems to be less defined, and the tumour appears to send prolongations in amongst the tendons of the foot.

The section of the tumour is of a yellowish-white colour, with, in some few parts, a pinkish tinge. On close inspection with the naked eye, it is noticed to consist of two distinct structures—one, a fine reticulated pale-white stroma (Plate X., Fig. 1*a*), the other, a bright yellow substance, occupying the meshes or loculi (Fig. 1 *b*) of the former structure. When examined under the microscope, with a power of 70 diameters, the white stroma (Plate X., Fig. 2 *b*) is seen to be composed

DESCRIPTION OF PLATE X.

To illustrate Dr. Harley's Report on Mr. Gay's Case of Fatty Tumour on Sole of Foot, p. 244.

Fig. 1. Section of the tumour, showing the reticulated pale-white stroma (*a*), and the bright-yellow substance (*b*) in its meshes.

Fig. 2. Microscopic characters of the tumour; *b*, of the white stroma, which is arcolar tissue; *a*, of the yellow substance, which consists of fat-vesicles.

Fig. 3 (*a*). Margarine crystals.

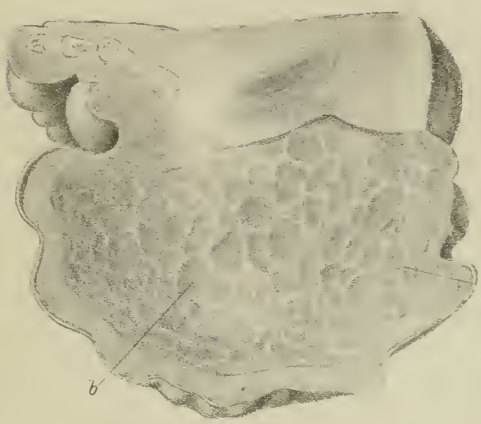

Fig. 1.

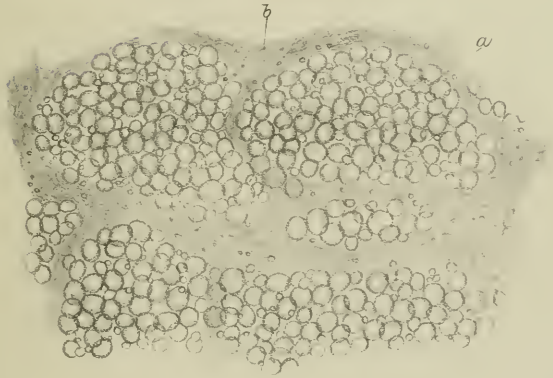

Fig. 2.

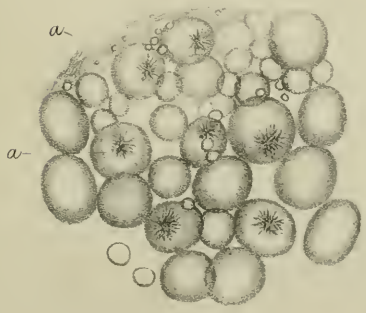

Fig. 3.

of fine fibres of areolar tissue, while the yellow substance (Fig. 2 *a*), occupying the meshes, is at once recognized to consist of groups of fat vesicles. When a portion of the latter substance is still more highly magnified (200 diameters), several of the fat vesicles are seen to contain crystals of margarine (Plate X., Fig. 3 *a*). In the majority of the fat cells, however, they are absent. The crystals consist of stellate groups of fine needles. On the addition of potash to the fat cells, the majority of them have their walls destroyed, and the contents escape; while in those whose walls remain undissolved by the alkali, crystals, having the characters above mentioned, rapidly form in their interior. The presence of margarine crystals, in the cells of fatty tumours, is by no means uncommon; indeed, it is not at all unusual for these crystals to be found in the subcutaneous fat of man or of the ox, and other animals; but from many observations, I am prepared to say that the crystals are post- not ante-mortem products. In many cases, indeed, it is merely the solidification of the margarine during the process of cooling.

The conclusion arrived at, from the examination of the specimen before me, is that the tumour is a fatty growth, containing more than the usual amount of areolar or connective tissue. This tissue is so abundant, indeed, and its mode of distribution so characteristic, that the specimen might not be inappropriately named, a "RETICULATED FATTY TUMOUR." Dr. GEO. HARLEY, *3rd of March*, 1863.

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7. *Cutaneous tumour.*

This, a flattened circular tumour, was removed from the middle of the back of an adult male; it was situated over the lower dorsal and upper lumbar vertebræ. Externally it presented the appearance of fungus hæmatodes, but as it had existed for many years, its slow development was incompatible with the ordinary characters of malignant disease. On examination by the microscope, no large nucleated cells were detected, but the exuding juice contained much dark granular matter, having the appearance of altered blood-discs: the tumour was considered to be probably an altered or degenerated nævus.

Mr. C. BROOKE, *3rd of March*, 1863.

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8. *Myeloid tumour of the femur.*

This specimen, consisting of a tumour involving the lower end of the femur, was removed by Mr. Curling, on the 5th of February, from a

patient in the London Hospital, a man, æt. 27, who had injured his left knee two years before, and had never walked since. The knee had gradually increased in size without pain until the 23rd of January, when an abscess opened over the outer condyle, which was found to communicate with a cavity in the end of the femur. The glands in the groin and popliteal space were much enlarged.

Mr. Curling, considering the femur to be affected with myeloid disease, removed the limb, after which the stump healed quickly. The patient did well, and the enlarged glands in the groin subsided.

On examination after removal, the lower end of the femur was found to be enlarged to nearly twice its natural size, its surface was uneven, and the cartilage almost entirely removed.

The vertical section showed a thin shell of bone filled up with red, and, in some parts, blackish masses, and a quantity of thick bloody fluid. In the centre was a cavity with firm walls partly filled with pus. The growth had commenced in the cancellated tissue, and successive extravasations of blood appeared to have taken place. In some parts of the tumour myeloid cells were found, other parts consisted of blood-clot. The enlarged glands in the popliteal space contained only the normal elements of the part. In the cancellous tissue of the bone, at the seat of amputation, a few myeloid cells were found.

Mr. L. S. Little, *17th of March*, 1863.

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9. *Melanotic tumour developed in a mole; excision; and the secondary formation of melanotic tumours in the integuments and nearly every internal organ.*

T. G., æt. 30, a porter, was admitted into Guy's Hospital, on the 15th of January, 1863, under the care of Mr. Thomas Bryant, with a melanotic tumour, the size of an orange, on the anterior margin of the right axilla, and numerous tubercles, varying from the size of hempseeds to nuts, in the integument of the abdomen.

It appeared that two years previously a mole, which was situated over the ensiform cartilage, began to enlarge, and about the same time the tumour on the margin of the axilla made its appearance. He applied for surgical advice at St. Thomas's Hospital, where the mole was removed, but as the growth immediately returned on the spot, a second operation was demanded two months after, in May, 1862.

From this time the axillary tumour gradually enlarged, and at different dates smaller tubercles made their appearance in the abdominal

walls. When admitted into Guy's, the man was pale and cachectic, his pulse was very weak and his powers were failing. Tonics, wine, and good living were administered with little benefit, as the tumours rapidly increased, and fresh ones made their appearance. In a few weeks a dry cough appeared, followed after a time by pneumonic expectoration; and from this time he gradually sunk, without any other definite symptom, dying on the 14th of March, 1863. It may be added that he had no head symptom.

At the *post-mortem* examination, made by Dr. Wilks, the following facts were revealed:—

A number of nodules of all sizes were on the body, consisting of soft cancer containing pigment, none being absolutely black.

On removing the *brain*, fluctuation was felt in the left hemisphere towards the median line, and on cutting it through a very loose growth was found, about the size of a walnut, consisting of a distinct vascular wall for outline, and within very little more than a few threads passing across it, and within these some serum. When this flowed out almost a complete cavity was formed. It thus appeared at first nothing more than an inflamed cyst, but there was sufficient structure on the adventitious material in the walls to show its cancerous nature, and its resemblance to other growths in the body; there was apparently, however, no pigment.

The *lungs* were full of tumours, probably about half of each was thus occupied; many of these were very large, as large as an egg; when cut they were found mostly of a brownish hue of different degrees of intensity and shade. Some were almost white, others brown from the presence of pigment. The *bronchial* and *mediastinal* glands were similarly affected. The *heart* had on its front surface, and embedded in the walls of the right ventricle, a tumour the size of a marble, which was also cancerous, and contained a small amount of pigment.

The *liver* was full of pigmental cancer; the tubera were smaller than those in the lung, and were situated more upon the surface of the organ. The *spleen* contained also two masses. The *lumbar glands* were also diseased, and contained much pigment; also the *mesenteric*. There were a few like growths in the *pelvis*, and one black nodule growing from the anterior wall of the mucous membrane of the bladder. There was no disease in the kidney.

Mr. Thomas Bryant, *17th of March*, 1863.

10. *Congenital tumour removed from the orbit.*

The patient, a very feeble emaciated female twin, æt. 7 weeks, was brought as an out-patient to St. George's Hospital, on account of the rapid growth of a congenital tumour of the right orbit. The eye was said to have been protruded out of the orbit by the tumour behind it, at the time of birth, and soon afterwards burst and withered away; but the tumour shortly afterwards showed an increase of size, and latterly had become very rapidly larger. Its growth was attended with increasing exhaustion of the infant's powers. On examination, a large lobulated mass was found projecting beneath the lower eyelid, and also, to a certain extent, below the upper, and lying partly outside the orbit on the malar and upper jaw-bones. At its apex were the withered remains of the eye, and one or two semi-transparent cysts lay under the upper eyelid, one at the inner corner of the orbit, and another near its centre. They seemed separate from the general mass of the disease. The latter felt hard and equable in consistence, did not appear vascular in structure, and was perfectly separate from the bones of the orbit. It moved under the influence of the muscles of the orbit.

Considering the great emaciation of the child, and the rapid growth of the tumour, it was clear that life could not be long maintained unless the tumour were removed; but the extreme feebleness of the infant rendered it very doubtful whether it could survive so severe an operation. On the circumstances being stated to the mother, she decided to follow Mr. Holmes's advice, and run the risk of removing the tumour. The operation was performed immediately, with the assent and assistance of Mr. Tatum. Chloroform was not given. Restoratives were kept at hand in case of syncope. An incision was made outwards from the external canthus, the eyelids dissected off the tumour, a ligature passed through the latter, in order to move it easily and without loss of time, and then the mass was scooped out of the orbit as rapidly as possible. Very little blood was lost. A portion of the mass which was left near the sphenoidal foramen was snipped away with scissors. Some remains of the cysts were seen lying on the frontal bone, but the child now sank into a state of such alarming syncope that it was not advisable to spend time in removing them. To obviate further loss of blood from the ophthalmic artery, the orbit was stuffed with "blue lint," the usual hæmostatic in the operating theatre at St. George's, consisting of lint steeped in a saturated solution of sulphate of copper. The child was aroused by beating its forehead with sponges full of cold water, am-

monia was applied to the nostrils, artificial respiration kept up, and as soon as it could swallow, small quantities of wine and brandy were given. As soon, however, as these measures were suspended the child sank into a state of collapse. The galvanic battery was now applied to the chest—the other measures not being intermitted, except when artificial respiration became again necessary, which was the case once or twice. Perseverance in these measures by the house-surgeons and pupils for about three-quarters of an hour was rewarded with success. The child revived in a little while sufficiently to take the breast, and in the evening the mother took it home.

It has been seen occasionally since that period, and has much improved in appearance. The parts display a good deal of general thickening, the suppuration having been rather extensive; but there is not, as far as can be judged, any recurrence of the tumour.

Cases of congenital tumour are not of very common occurrence. A tumour, which was in many respects similar to the one now exhibited, was removed by Mr. Holmes from the back of an infant only fourteen days old, and with perfect success. The report of the case will be found in the "Transactions" of this Society, vol. xii. p. 206, and at the time of its exhibition the subject did not appear to be at all familiar to the members who saw the specimen. In that case, as in the present, the operation was rendered necessary by the rapid growth of the tumour; but in that case the infant, though so much younger, was healthy, and a better subject for operation than in the instance before us; and besides, the exposed situation of the tumour rendered it easy to pass the chain of the écraseur round it, and remove it without hæmorrhage. In that operation a small amount of chloroform was given, and it may be doubted whether a similar measure would not have been advisable here also, to lessen the shock from the pain of the operation. It seemed to be from the latter cause rather than from hæmorrhage that the child's life was endangered.

The parts exhibited showed the remains of the collapsed eyeball resting on a large mass of substance much resembling udder,* of a hard, uniform feel, and white colour—not in any respect resembling malignant disease. Numerous cysts, containing thin serum, had been laid open. Other smaller solid masses lay in the neighbourhood of the principal tumour. Under the microscope the solid portion of the tumour showed nothing except fibrous tissue and simple nuclei.

Mr. Holmes, *7th of April*, 1863.

* The description of the tumour, Vol. XII., p. 207, would apply almost literally to the solid part of this tumour.

11. *Tumour removed from orbit.*

H. D., æt. 48, came under Mr. Sydney Jones's care at St. Thomas's Hospital, in March, 1863. He stated that twelve months previously, he had a severe fall, striking the nose and lower part of the forehead. Three months afterwards he observed a swelling about the size of a pea at the inner angle of the left orbit, causing slight projection of the upper eyelid. This swelling had been increasing rather rapidly in size, especially of late.

On admission, a tumour presented itself at the inner angle of the left orbit, protruding the upper and lower eyelids. It showed a transverse depression in the situation of the tendo oculi, having evidently been limited in its growth forwards by this ligamentous band: above and below this the surface was rounded, and somewhat nodulated. The part below was about the size of a small walnut, was moveable, and could be traced backwards into the orbit; the upper part was smaller, less moveable, and also to be traced into the orbit. The skin covering both portions was reddened, and showed turgidity of numerous small veins; in the neighbourhood of the tendo oculi it seemed adherent to the surface of the tumour. There was no obstruction to the lachrymal sac; at all events, there had never been sufficient to cause an overflow of the tears. The tumour was considered as springing from the periosteum of the orbit; but, as only slight displacement of the eyeball had occurred, it was probable that its connection with the inner wall did not extend very far back. It was therefore determined to attempt its removal.

One transverse incision was made above, and another below the tendo oculi with the object, if possible, of detaching this structure from the surface of the tumour. This, however, was found impracticable, the tendo oculi and neighbouring skin being infiltrated with the morbid elements. So that the skin, which was very thin, was carefully dissected upwards and downwards from the two lobes, and the peduncle of the tumour traced backwards into the orbit. This peduncle took origin from the os planum of the ethmoid, from which it was without difficulty detached. The tumour passed backwards, for about an inch, between the inner wall of the orbit and the internal rectus; the latter structure, however, being quite free and uninvolved. The parts were subsequently brought together by wire sutures.

No sloughing of skin occurred, as was anticipated from its thinness. The parts healed up very rapidly. At first there was some little ten-

dency to eversion of the lower lid; but, by careful dressing, this was corrected. The man left the Hospital quite well.

The action of the orbicularis and internal rectus was perfect; and there was no impediment to the flow of tears along the lachrymal canal.

The tumour was about the size of a large walnut, narrowing towards the peduncle, which was almost half-an-inch in diameter, and rendered bilobed by its relation with the tendo oculi. The section was soft, greyish, and fleshy-looking; and, on scraping, yielded a thick creamy fluid, with a somewhat reddish tinge. Under the microscope this juice was made up of round nuclei, with a beautifully-clear outline, each about the size of a blood-corpuscle, and containing, one, two, or sometimes more, very distinct nucleoli. These forms were embedded in a very delicate fibrous tissue.

The naked-eye and microscopical appearances, the rapidity of growth, and the infiltration of the tendo oculi and neighbouring skin, seem to indicate the cancerous nature of the tumour.

The patient was seen early in July; no trace of return of the disease could be detected. Mr. Sydney Jones, *19th of May*, 1863.

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12. *Recurrent fatty tumour of the scrotum.*

In May, 1863, I removed from the scrotum, lower part of the abdomen and inner part of the thigh on the left side, a large lobulated fatty tumour, weighing upwards of one pound, and measuring seven and a-half inches in length, and four and a-half inches in breadth.

The patient, a thin, spare man, noticed, in 1842, a swelling in the left side of the scrotum. It continued to enlarge until it attained a large size. There was great difficulty in the diagnosis, and the patient was seen by Sir B. Brodie, Mr. Travers, Mr. Lawrence, and myself. After an exploratory incision, Mr. Lawrence excised the tumour, including the left testicle and spermatic cord, in April, 1845. The tumour was composed of adipose tissue, and measured eight inches in length by six in width. A fatty growth about the size of a large chesnut subsequently formed in the left groin, and was excised by me in 1849. In November, 1855, I removed from the same side of the scrotum two small adipose tumours, one the size of a large chesnut, the other about half its size. About a year after the third operation a small swelling was again observed in the scrotum. It slowly but gradually increased, and in June, 1861, was the size of a small pear. The patient's health at this time

was so indifferent that I could not recommend an operation. In May, this year, the swelling had increased so much, and caused such great inconvenience that the gentlemen requested me to remove it. The patient recovered favourably.

The persistent tendency to the formation of adipose growths in a part not containing fat normally is very remarkable. In all my operations I was careful to remove every portion of fat, so that none might remain to form the nucleus of a fresh growth. The patient is a very lean person, and is subject to pains in the loins and lithic acid deposits. Fuller particulars of the early history of the case are given in my "Treatise on Diseases of the Testis," second edition.

Mr. Curling, *19th of May*, 1863.

IX.—DISEASES, ETC., OF THE DUCTLESS GLANDS.

I.—SPLEEN, ETC.

1. *Enormous spleen.*

Mr. Nunn exhibited a section of an hypertrophied spleen. The weight of the entire organ was two hundred and sixteen ounces. The measurements were as follows:—

Middle of the flat or gastric surface	8¾	inches.
,, convex	13½	,,
Transverse circumference	22	,,
Longitudinal circumference	36	,,
Length by the flat surface	15	,,
,, convex surface	21	,,

There was a spherical splenculus the size of a grape-shot.

The section was uniformly of the ordinary colour. There were no yellow deposits. The tunica albuginea was thickened and mottled.

Until April, 1860, the subject of the disease (a patient of the Middlesex Hospital) was a healthy, full-bodied young woman, a native of, and always resident in, London. She married in October. A slight pain in the side a month previous to that date was the first indication of anything being amiss with her. During the first year of her marriage she menstruated punctually. When, soon after the marriage, the size of the abdomen obviously increased, she believed herself to be pregnant, notwithstanding the menstruation; as she suffered only from increasing debility. She died on the 10th of November, 1862. There was great

peritoneal effusion but no disease of any other abdominal organ than the spleen. *Post-mortem* examination made in conjunction with Dr. Davidson, Charles-street, Manchester-square. Mr. Nunn stated that he believed the enlargement was due to a form of the so-called lardaceous disease. Mr. Nunn, *2nd of December*, 1862.

II.—SUPRA-RENAL CAPSULES.

2. *Case of disease of the supra-renal capsules.*

The specimens were sent to the Society for exhibition by Dr. Edgar B. Truman, of Nottingham, with the following history:—

The subject of the following case consulted Mr. M. H. Higginbottom about four months ago. His family history was good, with no discernible hereditary tendencies, and his business that of a wholesale grocer—not an unhealthy one. His habits were regular, and his conduct free from excesses of every kind, whilst his residence was in one of the most airy and healthy localities in the outskirts of Nottingham. At the time when he consulted Mr. Higginbottom he was 26 years of age; he then complained of excessive weakness and want of energy, but of no pain; there was a slight yellowish tinge on his countenance. He gradually lost flesh and strength, and at length was confined to his bed. The chest and abdomen were explored, as well as the urinary and intestinal evacuations, but without furnishing any indications of disease. The skin gradually darkened, and the only pain ever complained of then came on, viz., a dull, aching pain in the region of the kidneys. The weakness and emaciation increased, and towards the last there was vomiting.

Through the courtesy of Dr. Ransom and Mr. Higginbottom, I was present at the *post-mortem* examination, made on the 24th of September, 1862. The skin was observed to be universally discoloured, of a yellowish-brown hue, and more markedly so on the abdomen; there were no distinct patches of melasma. The head was not examined. There were old pleuritic adhesions and a puckered cicatrix at the apex of the right lung, otherwise the pleural cavities and the lungs were healthy. The heart was small, but with the exception of two or three atheromatous spots at the commencement of the aorta, was healthy. The liver was healthy, and the gall-bladder contained a colourless mucus; the ductus communis choledochus was pervious. The right supra-renal capsule was enlarged to twice its normal size, and, on making a section, was seen to be densely infiltrated with masses of yellow tubercle. Under the microscope, this tubercular formation was seen to consist of

numerous granules, oil-globules, free nuclei, and a few small and imperfectly-formed cells. The left supra-renal capsule was similarly diseased, but was not quite so large as the right one. The duodenum, close to its termination in the jejunum, was adherent to the pancreas. On separating the two viscera, a few masses of tubercle were disclosed lying between them. No other morbid change was found. There was no enlargement of the abdominal glands.

Dr. Samuel Wilks, *21st of October*, 1862.

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3. *Case of caries and necrosis of the lumbar region of the spine, complicated with disease of the supra-renal capsules.*

A mechanic, æt. 30, was admitted into the Middlesex Hospital, in September last, with pain and tenderness in the lumbar region of the spine, and a deep, fluctuating swelling in the left lumbar and inguinal regions of the belly, which communicated beneath Poupart's ligament with a large indolent abscess lying across the top of the thigh, between the common femoral vessels and the anterior superior spine of the ilium. These local signs were accompanied with emaciation, a degree of feebleness quite out of proportion to the loss of flesh, a very irritable stomach, and obstinate constipation.

It was plainly a case of spinal caries, with psoas abscess. A horizontal posture was enjoined, and small doses of strychnia were ordered. Under this treatment the stomach became less irritable, he was able to take more nourishment, and his general condition improved slightly. The abscess during this time remained nearly stationary. November 6th, at nine o'clock, A.M., on rising from his bed to go to the neighbouring water-closet, he became faint, grew weaker during the day, and expired at eight o'clock the following morning. During this last attack his breathing was quiet, air entered his chest freely, but his lips became blue, and his complexion dusky.

At the *post-mortem* examination, made thirty hours after death, an abscess, holding nearly one pint and a-half of pus, was found in the course of the left psoas magnus. Its source was a small cavity hollowed out in the bodies of the third and fourth lumbar vertebræ, which contained some small sequestra and thick curdy pus.* The boundaries of this cavity were uneven and friable, and the bony tissue for some distance around was solidified by a lardaceous deposit in the cancelli. The sac of the psoas abscess was thick, particularly at its lower end, where

* The corresponding portion of the intervertebral disc had disappeared.

it communicated with the abscess below the groin, by a small circular opening beneath the outer end of Poupart's ligament. The mass of the psoas had disappeared, only a small quantity of pale muscular tissue in connection with the twelfth dorsal and two upper lumbar vertebræ remained, and contained many small circumscribed abscesses.

On the opposite side of the spine there was a second and smaller abscess, reaching as high as the twelfth dorsal vertebra, and turning below towards the left, across the front of the third lumbar vertebra, beneath the anterior common ligament, where it communicated with the cavity already described, and ended in the first abscess. The sides of the bodies of the first and second lumbar vertebræ were denuded and bathed in pus, and the bony surfaces were rough, and had large vascular foramina—but were neither carious nor necrosed.

The abdominal viscera were healthy, with the single exception of the supra-renal capsules, which weighed 140 and 215 grains. They were hard and knobby. On section they presented a homogeneous surface, mottled with a few yellowish friable specks. In several microscopical preparations taken from them, traces of the tubular structure were discernible. The enlargement of the organs appeared due to infiltration with a material which was, in a fresh state, nearly homogenous and translucent, but after immersion in carbolic acid, finely granular. The apices of both lungs contained a few scattered depôts of tubercle. The right pleural cavity was almost entirely obliterated by old adhesions. The left side of the heart was nearly empty, whilst the right auricle was over-distended with a black, spongy, friable clot, and the right ventricle contained a mass of tough fibrine, wrapt about the musculi papillares, and prolonged through the trunk and primary branches of the pulmonary artery into the small divisions of this vessel.

In a recent article in the "Guy's Hospital Reports, 1862," by Dr. Wilks, it is stated that disease of the supra-renal capsules had been found by Dr. Addison in three cases of spinal caries, and that this complication has since been observed on one or two occasions. From the fact that in every instance the lowest dorsal, or upper lumbar, vertebræ, in the neighbourhood of which the capsules lie, were those affected, Dr. Wilks thinks it not improbable that the morbid process extends from the spine to the capsules; and this view derives support from the present case, where from the morbid appearances it is probable that the spinal preceded the capsular disease in order of time, and where that capsule which was contiguous to the older spinal abscess was most disorganized. The probably short duration of the capsular disease inferrible from the

generally firm, lardaceous character of these organs, and the presence of vestiges of their proper tissues, may account for the absence of bronzing. Mr. Hulke, *2nd of December*, 1862.

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4. *Apoplexy of the supra-renal body.*

The specimen was taken from a man who had died of phthisis much in the usual way. He gradually sunk; his end appeared to have been hastened by diarrhœa.

On examination, beside such appearances as might have been expected in the lungs, the right supra-renal capsule was in a very conspicuous state of disease. It was large and black. It weighed three drachms nine grains. It was uniformly distended, so that its shape was unaltered. On section, it was seen to be infiltrated with black coagulum, which a stream of water would remove from a small slice subjected to its action. The left supra-renal body was healthy.

No discoloration of the skin had occurred, nor did there appear to have been any other symptom of the disease. The extravasation must have taken place a very short time before death. This condition is occasionally observed at *post-mortem* examinations, but it does not appear to be productive of any distinctive symptoms.

Dr. Dickinson, *17th of March*, 1863.

Report on the above specimen.—I have examined the supra-renal capsule which was submitted to me, and find it as Dr. Dickinson states in an apoplectic condition, that is, using the term apoplexy according to a rather absurd habit as synonymous with an effusion of blood. It appeared as if some large vessel had given way in the interior of the organ, and that the blood had infiltrated through the tissue. On placing sections in water, the whole of the blood could be washed out, leaving the organ in a healthy state. I have on several occasions met with this condition, and have passed it by as of little moment, and should have done so on the present occasion had I not lately received a pamphlet by Professor Mattei, of the University of Siena, in which this subject of effusion of blood into the supra-renal capsule, or apoplexy, as he also styles it, is considered. He quotes the case of a man of sixty years of age who died with severe abdominal pains, and in whom such apoplexy was found, all other organs being healthy, and he considered that death was due to this. He also mentions the case of a fœtus which died at birth from pressure on the cord,

and here no organ was found in an abnormal state except the capsules, which were affected with apoplexy by infiltration. He thinks, therefore, that death may be caused by apoplexy of the supra-renal capsules, and that this is brought about through the agency of the sympathetic.

Although, as before said, I have met with this condition, but have hitherto attached no importance to it, yet the statement which I have quoted from one who has evidently paid some attention to the changes in the supra-renal organ must not be passed over, and therefore, will necessitate some further observations of pathologists.

Dr. Samuel Wilks, *7th of April*, 1863.

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5. *Apoplexy of the supra-renal capsule.*

The right organ was that exhibited. It showed a large coagulum of blood enclosed by, and distending, a very thin cortex of supra-renal capsule; and was removed from a man who had died in consequence of severe injuries, accidentally received. The shell, as it were, of capsule, was in every part intact. The soft supra-renal body was normal.

Mr. Canton, *7th of April*, 1863.

X.—MISCELLANEOUS SPECIMENS.

1. *Wax models exhibiting disease, produced by post-mortem examinations, or, verruca necrogenica.*

These were the models of the two hands of a late assistant in the *post-mortem* room at Guy's Hospital, and whose hands were affected by this peculiar disease of the skin. The principal parts affected were the knuckles of the fore and middle fingers of both the hands, and also the ring-finger of the left hand. These were covered with round patches, the size of a shilling, raised above the surface, rough, fissured, and of a brown colour. The most prominent parts were dry and brittle, so that portions of epithelium were constantly falling off. If a portion were picked off it might bleed a little, but not otherwise. The disease appeared to consist of a thickening of the epithelium, producing a warty appearance, or even somewhat like that of epithelioma.

This form of disease is remarkably chronic in its nature, persisting sometimes for years; in the present case, the subject of it had left his

employment for a year, and yet the affection had not materially altered.*

Sometimes the disease begins as a pustule; the latter breaks, but not disappearing, the base becomes hard, and a fresh suppuration may arise, constituting a chronic pustulation. As a rule, however, the progress of the disease is slow, and commences by a slight thickening of the epithelium; a corn is then produced, which gradually enlarges, and becomes rough on the surface. It is produced, evidently, by the irritating action of the morbid fluids of the dead body, on those parts especially which are liable to be rubbed against any projecting parts, as the ends of the severed ribs.

Dr. Samuel Wilks, 21*st of October*, 1862.

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2. *West Indian elephantiasis of the foot.*

The foot was removed by me, a few weeks ago, from a middle-aged negro, in the Hospital. It shows the enormous hypertrophy of the dermis, with the fatty degeneration of the muscles, which are found in such cases. The disease never extends higher up than the knee, and amputation through this joint, or rather immediately above it, making the flap from the gastrocnemius muscle is that which answers best. The muscles of the limb in such cases are always in a state of fatty degeneration, but that does not interfere with the healing of the wound, just as the arcus senilis does not prevent the ready union of the cornea in cases of the extraction of cataract; nor does it appear that the arteries of the limb are in any way indisposed to adhesive closure, though they probably participate to some extent in a similar fatty transformation. When I commenced practice here twenty years ago, there was the greatest dread of surgical interference with elephantiasis of the leg, from a belief that the complaint was generally associated with organic disease, particularly of the heart; but I have not found this opinion to be based on a reality; at all events, I have repeatedly removed limbs so affected, with the happiest results, relieving the patients from a distressing infirmity, and enabling them to get about, and do something for a livelihood.

Mr. Henry Thompson for Mr. Fiddes, 21*st of October*, 1862.

* It is now more than a year since the model was taken, and there is but little change in the appearance of the hands of the patient.

3. *Luna's clinical pocket-case.*

The object of Professor de Luna, of Madrid (the inventor of this pocket-case) is, to enable the physician by means of chemical reactions to detect at the bedside the pathological changes which the blood, urine, sweat, and other secretions undergo during disease.

The case contains the following acticles:—

1st. Two flat pieces of glass, one of which is coloured red.

2nd. Two phials—one containing bleaching powder; the other filter-paper, steeped in fuming nitric acid.

3rd. A caustic-holder, two glass pipettes, and a small horn spatula.

4th. A series of six reactive papers.

5th, and lastly, a small pamphlet explaining the method of employing the contents of the case.

By describing the manner of testing a liquid, such as the urine, a tolerable idea of Luna's method will be obtained.

1st. As regards the degree of acidity and alkalinity of the urine. This is ascertained by using the first three test papers, turmuric, and red and blue litmus paper.

2nd. The presence of phosphoric acid is recognized by the test-paper No. 4, which being saturated with the molybdate of ammonia is turned yellow by phosphoric acid.

3rd. The presence or absence of sulphuretted hydrogen is discovered by paper No. 5, which is saturated with the acetate of lead.

4th. The presence of sugar is detected by test-paper No. 6, which has been dipped in a solution of the chloride of tin.

5th. Chlorides are found by putting a drop of the liquid under observation on the coloured glass, and drawing the point of the caustic through it. A white stain indicates the presence of hydrochloric acid.

6th. The amount of urohæmatin is ascertained by putting a drop of the urine on the white glass, and adding to it some of the paper steeped in fuming nitric acid, which immediately develops a red colour, proportionate to the quantity of urohæmatin present.

7th. The presence of odoriferous principles is detected by adding to a few drops of the liquid some of the bleaching powder.

The tests, as above employed, will of course only give a rough qualitative analysis of the constituents of a fluid. For a quantitative analysis the old complicated methods are still required. Although, as the inventor himself says, the case is not complete, yet one must admit that a laudable attempt has been made to simplify the labours of the busy

practitioner by enabling him to ascertain the presence or absence of at least some physiological and pathological products met with in the course of disease. Dr. Geo. Harley, *21st of October*, 1862.

4. *A guinea-worm.*

This specimen is rather more than usually interesting, as it not only comes from a European, but from a member of our own profession. It measures exactly three feet in length, and is about one-eighth of an inch in diameter, except at the ends, where it abruptly tapers away to a fine point. It is one of five, but the others are imperfect specimens, having all of them been more or less injured in the process of extraction. Mr. Reynolds (from whom the worms came), the well-known surgeon at Bombay, consulted me some months ago on account of another affection, and during our conversation I had occasion to inquire what diseases he had suffered from while in India, when he mentioned guinea-worms. On further inquiry it appeared that he had brought the specimens with him to England, and seeing that I was interested in the subject, he has kindly sent them to me with the following notes:—

"Dracunculus, guinea-worm, or narroo, as it is called by the natives of Bombay, infests the wells in various parts of Western India, few of the wells about Bombay being free of them. While the worms remain in the water they are generally too small to be seen by the naked eye. I have, however, heard of one instance in which they were visible, and that was in the water-tanks of a vessel which laid in a supply of water at Bombay before proceeding on a voyage to Liverpool. On her arrival in England, as some of the water remained in the tanks, they were neither emptied nor cleaned out, but merely had fresh water added to what remained of that taken in at Bombay. On the ship's return to India, the tanks were emptied and cleaned out, and numbers of the guinea-worm were then found large enough to be visible to the naked eye. I am not aware if any of the crew either on the homeward or outward voyage were affected with the worms. The manner in which they enter the human system is a question still undecided by medical men. Some maintain that they enter by the mouth, others that they enter by the skin. From personal experience I incline to the latter opinion, for I have been accustomed to drink water, when out shooting, from wells which I presume contained narroo, and yet it was not till after many years' residence in Bombay that I became affected with them. At last, however, I discovered that what at first appeared to be varicose veins in

my legs were but the enlargements caused by the guinea-worms. For a time I was at some loss to account for the presence of the worm in my body, till I remembered, that one day when out shooting, one of my boots burst, and being too impatient to wait till another pair was brought, I took off both boots and stockings, and went on shooting barefooted over a piece of swampy stubble, during which my foot got scratched; and I believe that the worms entered my flesh on this occasion, for after an interval of six or eight months the first worm appeared—and that is about the time generally given for the worms to come to maturity in the human body. When the worms first penetrate the skin (if that theory be correct), they cause no irritation, nor leave any trace of having entered; the victim remains in complete ignorance of the infection until some day he finds a watery bleb about half-an-inch in diameter on one of his feet or legs. If he has no previous acquaintance with the narroo, and is ignorant as to the nature of the bleb, he may perhaps prick it to let out the water, or it may get accidentally broken; as soon as this happens a portion of the worm projects, and may thus be extracted. But those, like myself, who have frequently seen the worm, do not wait till the bleb appears, for, in many cases, the worms are quite superficial, and can be easily felt like a bobbin under the skin. Some are very tortuous, winding about under the skin, sometimes diving deeper, and again coming up to the surface at some other point. At other times the worms are very deep, and in this case the first intimation a person has of their presence may be on rising some morning to find his foot, leg, or thigh very much swollen without any apparent cause, and without pain or any trace of inflammation. The swelling proceeds in some cases until the leg becomes a very great size; these cases are almost always very troublesome; for it is difficult to reduce the swelling, and till that is accomplished no one will venture to cut down on the worm, for the simple reason that it is impossible to know where to find it; and even if he succeeds in getting hold of the worm, it will break, and the chances are that in such a case inflammation of an extensive kind, followed by profuse suppuration will set in, for the worm being very tortuous gives rise to a tortuous sinus. Suppurating cases are very troublesome and tedious.

"To the eye of an English surgeon unaccustomed to such cases, the leg would appear as if amputation were necessary. I have found the best treatment to adopt is strapping the limb and applying poultices of bread or bran, soaked in a lotion of Liquor Plumbi Diacetatis, over the opening or openings (for there are often three or four). In a simple case, when the

worm is superficial and easily felt by the finger, the barber (in Bombay one or two of the native barbers have devoted their attention exclusively to the extraction of the guinea-worm, and are very expert) proceeds at once to extract it by the aid of a needle and a sharp razor. With the point of the needle he raises a small portion of the skin, and with the razor he shaves off a piece about the one-eighth of an inch in size, going on taking up tiny pieces at a time till he gets down to the worm, which is easily recognized by its pearly white colour. As soon as the worm is reached the operator passes the eye of the needle under it, and takes up a loop, and uses gentle traction until he gets enough to take hold of with his fingers; he then pulls one end, and then the other, alternately, with a certain amount of force, till out comes the one and then the other end. In some cases a worm from three to four feet long will be extracted in an hour, but generally it requires a longer time, especially in those cases where the worm has a firm hold by its hooked tail, although he employs heat (a hot tile generally), and kneading the part with considerable pressure, under the idea that the heat and kneading causes the worm to let go his hold. In my own case, the barber took out one worm at one sitting, but the others would not yield until the next day. The manipulation my legs underwent caused inflammation, which terminated in suppuration; but being in good health, I did not suffer much inconvenience therefrom, and performed all my usual duties. I had five extracted, chiefly from the feet and ankles, one, however, was from the upper part of the right thigh. I forgot to mention another fact which goes far to corroborate the theory of the worms entering by the skin, and that is, that the water-carriers, who carry the water in leather sacks on their backs, have the worms in their backs. It is not uncommon to find the guinea-worm in the scrotum. I have seen them in that locality both in Europeans and natives—the fact of the natives using water as a means of cleanliness, both after micturition and defæcation, accounts for the worm being found in them in this situation. I have never heard of any worm having been found in the inferior animals, though dogs and cattle wallow in tanks full of the worms. Passing a galvanic current through the limb assists very materially in the extraction of the worm, especially when the hook is firmly attached; and should there be other worms in any other part of the body, they are killed and turned into chalk by this treatment; so, at least, says an assistant-surgeon of the Bombay army. I have not experimented with the battery myself, nor have I extracted many worms, as in general it requires great patience; and as the barbers are very expert at it, and

time being of no value to them, I generally tell patients who come to me with guinea-worms to send for the barber."

Dr. Geo. Harley, 18*th of November*, 1862.

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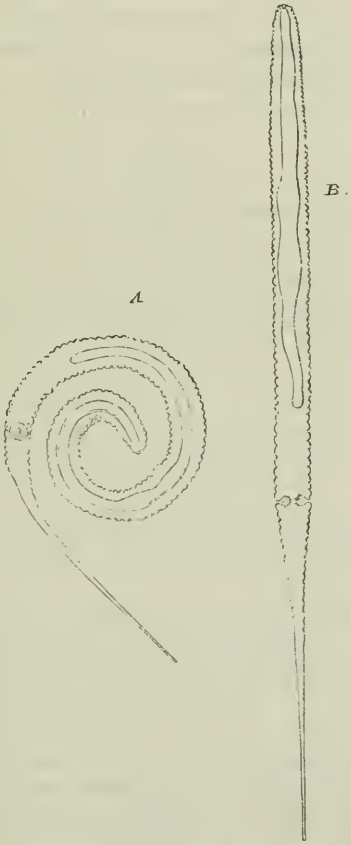
5. *On the young of the guinea-worm.*

As a sequel to the interesting discussion which took place at the last meeting of the Society, regarding the manner in which the guinea-worm enters the human body, I have now to exhibit several microscopic

Woodcut 37.



specimens of the young. The five adult specimens in my possession are

females, and they are all quite full of young—so full, indeed, that scarcely a fragment of the worm can be put under the microscope without revealing multitudes of them.

The young of all the specimens seem to be at the same stage of development. The are very small objects, measuring only $\frac{1}{42}$ inch in length, and $\frac{1}{1500}$ inch in breadth. They are mostly all coiled up as represented at Fig. A.*

When stretched out, as at Fig. B, the blunt, rounded head, and the long, sharp, needle-pointed tail of the worm are well seen. From the peculiar conformation of these young specimens, I should imagine it highly probable that they penetrate the human skin and find access to the cellular tissue by means of their hard, sharp-pointed tails. The head is much too rounded to render it in the least degree probable that they penetrate with it in preference to the tail.

Dr. George Harley, *2nd of December*, 1862.

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6. *Case of so-called "amyloid" degeneration of the liver and kidneys, with an amyloid tumour of the dura mater.*

The specimens exhibited were obtained from the body of a young woman, who had been under the care of Dr. Dudfield of Kensington, and to his kindness it is owing that I am enabled to bring the case before the Society.

The following history of the case and description of the *post-mortem* examination were given to me by Dr. Dudfield, along with the cerebral tumour to be presently described, a portion of the liver and one of the kidneys.

"M. A. T., æt. 24, a delicate person always, but in early life of a lively temperament, had been "unfortunate," and probably suffered from syphilis.

"Had rheumatic fever six years ago, since which time she has been weak and ailing. About four or five years ago she lost the use of her left arm and right leg, and never recovered that use to any great extent. The attack was sudden. For two or three years her manner has under-

* The figures of the young worm were sketched for me by Mr. Bastian, to whom I gave the adults, for the purpose of anatomical investigation; and I have much pleasure in saying, that his researches have yielded most interesting results, a full account of which will be found in the Linnæan Society's Transactions, vol. xxiv. p. 101.

gone a change, and she has suffered from depression and stupor. For at least two years has had great pains in the head, especially in the region of the left temple and over the left eye. During twelve months has noticed that the sight of the left eye was becoming defective; thought "a skin was growing over it." Has certainly been quite blind three months. During twelve months has had a hacking cough, with hæmoptysis. Has been subject to epileptic fits for six or eight months. The menses have been absent three years. It is reported that she vomited blood during this period. There has been daily sickness after meals for six months. The bowels have been irregular, and the urine turbid, and red, with deposit.

"Has been in various hospitals. Admitted on the 5th of September, 1862. Was then feeble, depressed, slow of speech, and of low intelligence. Some degree of squint in left eye, apparently the pupil of that eye being dilated and fixed; the eye itself very bright and clear. Pale and emaciated, it was evident that she came in to die.

"She had fits of an epileptic character, and some cough, with little expectoration. The appetite was capricious, the sickness almost constant. There was also great pain, as described above, so that she frequently required morphia. Her health varied from day to day, but she became constantly weaker. Her habits were sometimes dirty, and constantly so during the last week of her life, when she was rarely sensible, but breathed noisily, and moaned much. The fits were very frequent, and she became more and more "lost." She died on the 19th of October.

"*Post-mortem* examination three days after death.

"Body very emaciated. Nothing unusual noticeable in its contour.

"*Thorax.*—Heart healthy. Left side contracted. Right side contained much blood, both fluid and coagulated, and decolorized fibrinous clots, very elastic, extending into the vessels and in the aorta. Much softened tubercle in right lung, at lower and lateral part of right lung. The lung was inseparably united to chest wall. Other slight adhesions to the front of the chest. Lungs spumous, and bronchial tubes reddened.

"*Abdomen.*—Liver occupied great part of the cavity. Weighed eight or nine pounds. Rather flat on anterior surface. Much thickened posteriorly. Gall-bladder healthy. On section, liver very pale and semi-transparent, whitish and very dense.

"Spleen large and healthy. Pancreas and uterus also. Ovaries

shrunk. Mucous membrane of intestine and stomach soft, and marked with patches of extravasated blood, like scattered tea-leaves. Stomach and intestines empty.

"*Cranium.*—Brain rather soft. Lateral ventricles dry. On left optic nerve, anterior to the commissure, was a small tumour."

A lobulated tumour, of firm consistence, and of much the colour and transparency of cartilage, occupied the space of the left optic nerve. The growth was about as large as a chesnut. It rested on the left side of the olivary protuberance and the sella turcica. It appeared to have originated in the dura mater, which was deficient at the place of the tumour. As much lay beneath that membrane as upon it. The left optic nerve could not be discovered in the preparation, it had apparently been divided by pressure. The third nerve on the same side was compressed.

While fresh, the tumour gave with tincture of iodine the deep orange tint characteristic of so-called "amyloid" disease. After it had been kept for some months in strong spirit, this effect was no longer produced to the eye. Under the microscope, however, it was still found that the minute blood-vessels were coloured as the whole had been formerly.

Examined with the microscope, as to its structure, it was found to be semi-transparent, and nearly uniform. Some shining nuclei were, however, interspersed which were unaffected by acetic acid. Some were as large as pus cells, some smaller.

The kidney, which was examined, was rounder than natural, though it only weighed four ounces. The capsule was thicker than natural, and slightly adherent. The surface of the kidney was rather irregular, and had a sandy texture, though it was not absolutely granular. On section, the cones were found to be preternaturally near the surface, in some places they nearly touched. The general tone was lighter than that of health, and had faint pinkish mottling. The tissue was translucent like wax, and very firm. On the application of tincture of iodine, cones and cortex alike turned the deepest orange, or very dark brown. The colour was most intense on the Malpighian bodies of the cortex, and the blood-vessels of the cones.

The fresh kidney was examined with the microscope. The epithelium was perfectly natural, the nucleus and cell-wall were quite distinct.

Many of the tubes were as in health, but others, both cortical and

straight, to which the same description exactly applies, were peculiarly affected. They were greatly dilated, by some transparent material which, in some cases, imbedded epithelial cells. One of the tubes measured $\frac{1}{250}$ in diameter. Some of the tubes were quite without epithelial lining, while with others the cells had the appearance of having been fused together upon the wall. The parietes of the tubes were remarkably thickened, instead of the basement membrane being a mere film, it was of visible substance.

The Malpighian bodies were large and lobulated, but not in other respects abnormal.

A hardened section, subsequently examined, gave further particulars. The spaces between the Malpighian bodies were diminished, so that the section included too great a number of them. Some of these structures were visibly enlarged, and the vessel inside them preternaturally distinct. The cortex was very uniform, as if its several structures had been soldered together by some diffused material. The cortical tubes were with difficulty seen, while the tubes in the cones were manifestly thickened.

The tumour which existed in connection with the dura mater much resembles one described by Dr. Murchison, in the last volume of the "Transactions." In both cases the amyloid reaction ceased to be observed after immersion in spirit. Tuberculous patients seem peculiarly liable to the disease.

With regard to the affection of the kidney, it appears that a general infiltration of the "amyloid" material pervades the organ. In other specimens which I have had the opportunity of examining, there was an abundant deposit round the blood-vessels and between the tubes. The vessels appear to be first affected. The transparent exudation is poured out in their neighbourhood. It insinuates itself among the tubes, and as it seemed in the present case, occasions thickening of their walls.

Dr. Dickinson, *2nd of December*, 1862.

Report on the above specimen.—Having examined Dr. Dickinson's case of "so-called" amyloid disease of the kidney, and in the brain, we find that the diseased tissues of the kidney, although not coloured blue under the combined influence of iodine and sulphuric acid, assume, when submitted to these reagents, a deep dusky-reddish tint, such as is commonly observed under similar conditions in tissues affected with the amyloid disease; but we find that the tumour from the brain acquires

simply the ordinary yellow colour which iodine imparts to albuminous tissues.

We are of opinion, therefore, that the deposit in the kidney is undoubtedly of the "so-called" amyloid character; but we do not find any evidence from the reaction that the cerebral tumour belongs to the same class. We should add that the specimens had been kept some time in spirit, and that hence possibly their readiness to respond to the usual tests had become impaired.

Dr. Wilks,
Dr. Murchison,
Dr. G. Harley,
Dr. Bristowe, *5th of May*, 1863.

7. *Hypertrophy of the skin of the fingers and hand.*

Mr. Nunn exhibited the cast of the hand of an out-patient of the Middlesex Hospital, a male, æt. 60.

The palmar tissues of the ends of all the fingers but one were increased in width and thickness to about three times what would be normal. The thenar and hypothenar eminences were similarly affected; and as well, the skin over the olecranon, and the skin along the outer side of the feet and of the heels. The enlargements were more solid than natural tissue, and at points had a whitish-yellow appearance, as though there were deposits of that colour just below the surface. The thickenings took place evidently where pressure fell. Mr. Nunn expressed his conviction that the disease had a gouty or rheumatic origin, but that it was determined to particular points by the irritation or stimulus produced by pressure, as the finger that was not affected was one that happened to have been drawn into the hand by an injury of its tendons, so as to be out of the way of pressure.

Mr. Nunn, *2nd of December*, 1862.

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8. *A thigh and leg removed by amputation at the hip-joint.*

This limb was removed on account of a malignant tumour developed in the substance of the biceps muscle, and obliterating the femoral artery. The tumour was first observed by a young married woman in March, 1862. It increased rapidly, and was removed by Mr. Wells in June, 1862. It was distinctly capsulated, and was entirely removed.

It proved, on examination by Mr. W. Adams, to be true encephaloid. Growth very soon recommenced in the same spot, and the foot and leg began to suffer from want of circulation. The foot and outer part of the leg had previously been anæsthetic, owing to the division of the sciatic nerve at the removal of the tumour. In November the patient fell, and fractured both tibia and fibula of the diseased limb. After this the tumour grew more rapidly, the general health began to suffer, and it was determined to remove the limb at the hip-joint. Mr. Wells performed the operation on the 29th of December. Very little blood was lost, and the patient had gone on remarkably well ever since.* About half the wound had healed by first intention, and the remainder was granulating. The tumour was a well-marked example of encephaloid. Part of it surrounded the femoral vessels in the middle of the thigh, and about three inches of the artery were completely obliterated, although the vein was pervious. The sciatic nerve terminated, at the point where it had been divided, in a bulbous enlargement. Some blood taken from veins in the immediate neighbourhood of the tumour contained cells, differing from blood-globules in their irregular size and outline, and closely resembling those observed in the juice of the tumour. Mr. Wells remarked that it was probable the extension of cancer from the surface to the internal organs took place in this way by means of the blood. Mr. Spencer Wells, *6th of January*, 1863.

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9. *Leucine and tyrosine, from the urine of patients suffering from typhus complicated with jaundice.*

In relapsing fever, jaundice is a very common symptom; but in true typhus it is so rare, that some of the most accurate and experienced observers have never met with an instance. Four cases, however, have come under my notice at the London Fever Hospital during the last twelve months, in which jaundice was developed in the course of typhus. In all, the characteristic typhus-eruption was well-marked. All the cases were of a severe form, and had the "typhoid state" strongly developed; three out of the four proved fatal. The urine in all of the cases presented a deep jaundiced tint, but in none did it yield the reaction of the bile-acids. In two cases, the urine was subjected to further examination, and was found to contain crystals of leucine and

* She was in excellent health six months after amputation, but a hard tumour was then found in the cicatrix.

tyrosine, in considerable quantity. In one of the cases, urea had almost entirely disappeared from the urine, leucine and tyrosine being apparently substituted for it.

On *post-mortem* examination of the fatal cases, no obstruction could be found in the biliary ducts to account for the jaundice. The hepatic tissue was rather pale, but to the naked eye appeared normal; the outline of the lobules was quite distinct. Under the microscope, numerous crystalline masses of leucine were discovered, and the secreting cells were found to contain an unusual amount of oil. Leucine and tyrosine were likewise detected in the secreting tissue of the kidneys.

The jaundice, in these cases, was probably the result of the poisoned condition of the blood interfering with the natural transformation of the bile-acids into urinary pigments, and causing them to be converted into bile-pigment. Leucine (C_{12} NH_{13} O_4), and tyrosine (C_{18} NH_{11} O_6), are products of the destruction of the animal tissues intermediate in composition between the proteine compounds on the one hand, and the less complex substances, urea, uric acid, kreatine, &c., on the other. Their presence appears to indicate an imperfect metamorphosis of the tissues. They have been found in the urine in other diseases characterized by a poisoned condition of the blood, and also in cases of acute atrophy of the liver. The crystalline forms assumed by leucine and tyrosine are figured in the Atlas to the *Klinik der Leberkrankheiten*, by Professor Frerichs, of Berlin, and also in the frontispiece to the first volume of the English translation of this work, published by the Sydenham Society.

Specimens of leucine and tyrosine, from the urine of the patients suffering from typhus, were exhibited under the microscope.

Dr. Murchison, *3rd of February*, 1863.

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10. *Extensive phagedænic ulcer.*

W. M., æt. 21, a fat-collector, spare and thin, but fresh-coloured. His parents, who are healthy, state that his habits have been temperate and steady; but this is questionable. Although not a strong man, he has had no serious ailments, nor any evident hepatic or stomach disorder.

Was seen by Mr. Sarvis of Bethnal Green on the 4th of September, 1862. He complained of pain in the right hypochondrium, without jaundice or sickness. Three weeks afterwards, deep fluctuation was felt,

and a considerable swelling observed in that region. Dr. Jeaffreson, who was consulted, thought it might be an hepatic abscess; but leant to the opinion of its being independent of that organ. On the 11th of October, Mr. Sarvis very properly opened the abscess, and evacuated a large quantity of healthy matter. The matter seemed to burrow beneath the muscles in the direction of the umbilicus. A few days after, the edges of the wound began to slough by a process of white gangrene, or phagedæna. I was requested to see him in consultation on the 3rd of January.

I found a large ulcer, which had destroyed the integuments extensively over the left side of the abdomen and back. The superficial fascia had been removed, together with a large portion of the external oblique muscle. The process seemed to spread more rapidly beneath than in the integuments, so that in several directions, especially towards the hepatic and umbilical regions, they considerably overlapped the subjacent structures. A supporting diet, and tonics were administered, and a variety of disinfectant applications suggested, so that another might be used in the event of one not proving of any avail.

I saw the patient again a few days after. The ulcer had increased in every direction. The sheath of the rectus had been opened, and that muscle was, as it were, fast melting away by the same process as that by which the external oblique had been almost entirely removed. The transversalis was also affected, and between its fibres spaces existed, through which the underlying structures could be seen, when the matter in which they were bathed, had been sponged away. The fibres of the affected muscles had become very pale, were insensible to stimuli, and took no part in the respiratory or evacuative functions. At this time the pulse was weak, 124 per minute; the tongue red and glazed, although the appetite was good; urine loaded with phosphates; bowels opened, with occasional attacks of diarrhœa; and the breathing unembarrassed. After this time Mr. Cock saw the poor fellow, and I lost sight of him until the 22nd of January, 1863, the day before he died. The disease went on extending its ravages, and he died extremely emaciated, and worn out. The parents say that the evacuations from the bowels were of a brownish colour, until within a week of his death, when they became yellow, "like the yelk of an egg."

I made a partial *post-mortem* examination on the day after death, with Mr. Sarvis's assistance.

At this time the size of the ulcer was horizontally, thirteen inches and a-half, and vertically, twelve inches. It had extended in front to the umbilicus: behind to within an inch and a-half of the vertebral spines; above to the nipple, and in the opposite direction three inches below the spine of the ileum. It had destroyed the greater portions of the external and internal oblique, of the transversalis, and rectus muscles. The portions of the affected muscles which remained, had an extraordinary livid colour, in striking contrast to the pale red colour of other muscular structures. It had exposed, and denuded of their periosteum the ninth and tenth ribs, and the cartilage of the eleventh, and laid bare portions of the two glutæi. It had penetrated the peritoneum in several places, and in one place the ascending colon. To the opening in this bowel the free edge of a portion of peritoneum had become adherent, so that no effusion had taken place. The liver was also exposed, and its convex surface had been deeply eaten into by, apparently, an extension to its tissues of the same phagedænic process. I ought to say that Mr. Sarvis, to whose opinion I should pay great deference, and who had watched the case attentively throughout, was decided in his opinion that this diseased portion of liver represented the abscess out of which originally the subsequent mischief sprung. The liver was large and very fatty. A clot filled the portal vein.

The gall-bladder was empty, and very pale. It contained a small quantity of dirty yellow fluid, which consisted entirely of mucus, columnar epithelium, and a few cells. The duodenum contained the same kind of fluid. The kidneys were large and congested; pancreas, spleen, lungs, and heart healthy. Mr. Gay, *3rd of February*, 1863.

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11. *Condition of palmar bursæ, five years after operation.*

Mr. Partridge showed a dissection of the left hand of a labouring-man, æt. 49, upon which he had operated five years ago, for enlargement of the palmar bursæ, by an incision through the integument, fasciæ, and anterior wall of the bursa, above the anterior annular ligament. Innumerable albuminous bodies, like melon-seeds, were expressed from the distended bursæ. Rest, graduated compresses, and the application of iodine-paint completed the cure. This man died of renal disease in February, 1863. Upon examination of the hand, a deep dimple in the skin was observed just above the anterior annular ligament, the result of firm adhesions between the subcutaneous fibrous tissues and fascia adjacent to the cicatrix of the wound made in the operation. The wrist-

joint was stiff, but there was free movement of the fingers. The enlarged bursa appeared to have been that, or those, of the flexor sublimis, and mainly that portion attached to the tendon of the middle finger; and the bursa of the flexor longus pollicis. No albuminous bodies were observable.

The tendon of the flexor longus pollicis was wasted and adherent to the ligaments of the carpus, from the cicatrix above the anterior annular ligament, as low as the head of the metacarpal bone of the thumb; above and below those points the tendon was of its ordinary size, free from adhesions, and lubricated with its natural bursa. The flexure-movement of the last joint of the thumb was imperfect. The bursæ of the other palmar tendons, though thickened, were entire, and appeared to be endowed with their usual lubricity.

The tendon of the third extensor of the thumb (the extensor secundi internodii) was wasted and adherent where corresponding to the groove in the radius and to the back of the carpus, but below the wrist it retained its natural size and adhered firmly to the tendon of the second extensor (extensor primi internodii). So that the extension of the two last joints of the thumb was solely effected by the contraction of the extensor primi internodii. Mr. Partridge, *17th of March*, 1863.

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12. *Elephantiasis Græcorum and Leontiasis, affecting the throat as well, and seen by the aid of the laryngoscope.*

Mr. R. H., æt. 44, consulted me on the 16th of March, 1863. He was suffering from *elephantiasis* of the Greeks, which began to affect him after his return to England, some five years ago; he had been twenty-five years constantly on the coast of Malabar in the merchant service. The disease commenced in the hands in the usual way, afterwards it appeared in the feet, then the mouth, throat, face, and ears, became affected. The eruption of the face and breaking out, he says, is nothing, but the tubercles are the things that cause him the most trouble. The wrinkles and folds of the forehead, face, and ears, together with his general aspect, give a true representation of *Leontiasis*. Tubercular swellings are seen on the forehead, the cheeks, the nose, lips, and other parts; associated with these are small sores covered with a scaly eruption, which are exceedingly painful. In the hands and wrists, and about the feet, beneath the skin, are hard lumps, devoid of sensation; some of the phalanges of both feet and hands are lost, and the nails are ulcerated at their terminal ends, so that he is obliged con-

stantly to wear gloves on his hands. The hair had changed to a light colour, a sort of yellowish-brown. The body generally was not at present involved, although when abroad he had spots in various parts of the trunk, in size from a shilling to half-a-crown, but which were *not* of a secondary nature.

The throat and fauces were raw and granular, with ulceration of the mucous membrane in patches; the velum formed a continuous narrow semicircle from side to side. On the left, the uvula was incorporated with the velum as per sketch.

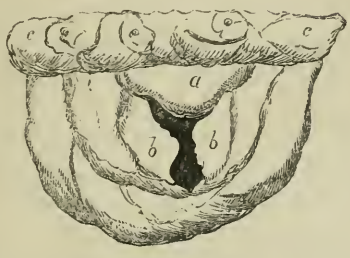
Woodcut 38.

The tongue was swollen, fissured, dry, raw, and ulcerated, yet there was no pain anywhere. The mouth could not be well opened, and the tongue, therefore, could only be slightly protruded on account of the swelling, yet I was able to make a good laryngoscopic examination; the breath, however, was offensive, and partook of the character of rancid pus. The parts composing the larynx were much thickened, puckered, and irregular, with no trace of symmetry in the disposition of the folds. The sketch shows the puckered base of the tongue, the narrow but thick epiglottis, and thick folds of mucous membrane running down to the vocal cords, which were absorbed in the same, thus giving an irregularly-shaped fissure to the glottis. The epiglottis is larger than is represented, but the form is correct. He had a bad cough. The voice was a sort of shrill, loud squeak, or false tenor, which might be expected from the condition of the throat and larynx; and was of that character, described by various authors, which permitted of the immediate recognition of the disease in ancient times. Indeed, St. Luke, in the 17th chapter of his Gospel, speaking of ten lepers who approached our Saviour, says they were immediately recognized by the sound of their uplifted voices, when calling upon Him to have mercy upon them.

As the patient was brought before the Society, and answered questions put to him by the Fellows, the correctness of the foregoing

description will be at once recognized. It was the first case of elephantiasis of the throat I had examined with the laryngoscope, and

Woodcut 39.



a, the epiglottis; *b. b.*, the irregular vocal cords, surrounded on either side by the thickened aryteno-epiglottic folds; *c*, the back of the tongue.

probably the first in this or any other country which had been thus inspected. I may observe that in such cases the voice is at first hoarse, then like that in this patient, and finally may become extinguished from ulceration of the vocal cords. Dr. Gibb, *17th of March*, 1863.

13. *Result of Pirogoff's excision of the ankle-joint, five years after operation.*

Mr. Partridge exhibited a lad, æt. 11, whose left ankle-joint he excised by Pirogoff's method on the 24th of March, 1858, on account of abscesses about both ankles, communicating with the posterior calcaneo-astragaloid joint, which was entirely disorganized. The ankle-joint and all the other articulations of the foot were sound, though the soft parts about the instep were much injured by burrowing abscesses. The stump had quite healed about the middle of May, and in June the boy could bear his weight upon it, and walk about; he wore a tubular boot with a sole a little thicker than that of the boot on the other foot. In this case, both malleoli and the lower articular surface only of the tibia were removed with the saw.

When exhibited to the Society this lad could walk about without lameness, and there was not more than a difference of half-an-inch in the length of the two limbs. Mr. Partridge, *7th of April*, 1863.

14. *Syme's amputation.*

On the 21st of April Mr. Holmes exhibited to the Society, in connection with other patients who were exhibited on the same day, a man æt. 25, on whom he had performed Syme's amputation, on account of disease of the tarsus, about one year previously. The disease was of a strumous nature, and had existed for four years before his admission. The operation was performed strictly after the manner which Mr. Syme has recommended. It was free from all difficulty, and the stump healed up kindly. A button-hole was cut in the posterior flap, after it had been shaped, to allow of the exit of the matter; but this was found useless, as matter presented at the opposite side of the flap and had to be evacuated by incision. The operation was performed on the 3rd of April, 1863, the man was discharged with the stump almost, if not quite healed, on the 17th of May, and on the 11th of June the stump was so free from irritation that an artificial foot was adjusted. The latter, however, was a cumbrous, heavy machine, which gave him some inconvenience, and occasionally irritated the stump; and it seemed doubtful whether he would not have walked better with a simple round boot.

The points to which the attention of the Society were directed were, 1. The ease with which the patient could walk without any apparatus whatever, and the consequent great advantage of the operation at the ankle-joint, over those performed higher in the leg; this, which is the chief advantage in these operations, is sacrificed if the bones be sawn through considerably above the ankle, as some surgeons recommend. 2. The full, rounded stump, by means of which the cicatrix is taken well out of the way of pressure, and the patient walks on the natural skin of the heel. 3. The rapidity and ease of the recovery.

Mr. T. Holmes, *21st of April*, 1863.

15. *Disease of the ankle-joint; three cases; amputation at the joint after the manner of Syme.*

The first case was that of a young woman, æt. 26, on whom Mr. Thompson had done this operation in 1857. She was in Hospital about four or five months, and then went to Margate, where she did not improve; but soon after her return the stump was sound. She could then bear her weight upon it, and had an artificial foot made by Weiss, which she has worn ever since. She has an excellent stump, and performs her duties as teacher in an infant school.

The second case exhibited was that of a young woman, æt. 18, whose foot Mr. Thompson removed in July, 1855. She made a good and quick recovery, wears a common circular boot, and walks three miles daily to her avocations in a laundry.

A third case shown was that of a boy, upon whom Mr. Thompson performed the operation in December, 1861. He was discharged from the Hospital in two months, cured; has worn a circular boot since, and has an excellent stump.

These were three out of six similar cases in which he had performed this operation with like results. He should not here enter upon the various points of comparison between Syme's operation and that modification of it in which a portion of the os calcis was left in the flap, but only refer to the different results which remained after the two operations, as regards the kind of artificial limb which was applicable afterwards. It is very important for the surgeon and the mechanician to act in concert in most amputations of the lower extremity; and it was necessary to compare two artificial limbs to illustrate the advantage in relation to this matter which the proceeding of Syme offered over that of Pirogoff. In the former, the patient enjoyed the advantage of complete ankle-joint movement in the limb; while in the other, the stump being so close to the ground, there was no room for it, and the best substitute that could be applied was that afforded by iron hinges outside the limb. In performing Syme's operation, care is to be taken to remove a sufficient slice of bone, including the two malleoli, instead of merely removing the lower portion of the latter, so as to avoid extreme width and a bulbous stump, which was more difficult to fit with a well-made artificial limb than a stump which tapered gradually from the calf downwards. Mr. Henry Thompson, 21*st of April*, 1863.

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16. *Pirogoff's operation.*

E. N., a policeman, æt. 29, was admitted into Guy's Hospital, under the care of Mr. Thomas Bryant, on the 25th of February, 1860, with extensive disease of his left tarsal joints of nine months' standing.

He was a pale and delicate-looking man, although he stated that he had enjoyed good health, and had lived regularly and steadily.

Two years previously, however, he had some disease of his right index-finger, for which amputation was required.

The disease in his foot came on without any known cause; it made its appearance by swelling, which gradually increased, and for three

weeks sinuses had made their appearance. There was little doubt as to the desirability of an operation, and Pirogoff's amputation appeared the best. On the 8th of September, 1860, this was accordingly carried out.

An incision across the sole of the foot between the malleoli was first made, and os calcis divided. The anterior incision was then completed, and the lower ends of the tibia and fibula sawn through; the operation being completed by the slightest dissection. The tendo achillis was not divided. The parts were brought together without difficulty, and fixed by pins.

Steady and rapid convalescence followed. In three months the wounds had nearly closed, and the man could bear the weight of his body upon the stump, no amount of pressure causing pain. He left the Hospital for the country, where he remained some months; and when he returned, the repair was complete; he could walk without the slightest difficulty, and even hop or jump upon the stump without pain. He has since been following an active life unimpeded by the condition of his foot. The limb is about one and a-quarter inch shorter than the other. The cicatrix of the wound is well in front, and the pad of the heel is perfect. He wears a boot with a well-padded socket for his stump.

Mr. Thomas Bryant, *21st of April*, 1863.

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17. *Specimen of skin affected with molluscum and the eruption of typhus.*

The specimen of skin measured six inches by four, and had been removed from the abdomen of a female, æt. 53, who died in the London Fever Hospital in an advanced state of typhus fever, on the 15th of March, 1863. On its removal from the body, the skin had been immersed in very strong spirit, and the characters of the typhus eruption were remarkably well preserved. The portion of skin was also studded with numerous pendulous tumours of molluscum, varying in size from a pin's-head up to a small cherry. Most of the little tumours presented a shrivelled appearance, and the cysts in their interior were for the most part empty. The smaller tumours presented a small black dot at their summit, corresponding to the plugged orifice of the sebaceous duct. The surface of the entire body, the trunk, extremities, face, and scalp, had been covered with similar tumours. Unfortunately no particulars could be obtained as to the patient's history, as she was unable to give any account of herself from the time of her admission into the Hospital up to the time of her death. Dr. Murchison, *5th of May*, 1863.

18. *Cysticerus cellulosæ removed from the lower lip.*

This specimen was taken from a woman, æt. 21, who came under my care in April last.

She stated that she had had a tumour of the lower lip for six or seven months; this tumour was at first small, but for a fortnight before removal had a very rapid growth. It was situated to the left of the median line at the junction of the lip with the gum. Its removal was effected from the mucous surface. It was placed more deeply than ordinary serous cysts, being embedded amongst the muscles of the lip. The cyst was very tough and fibrous; it was opened under water, and from its interior there escaped a body about the size of a pea, which presented the naked-eye and microscopic appearances of a cysticerus cellulosæ.

She had no symptoms indicative of tape-worm. All the members of her family are great eaters of pork; and her sister has recently evacuated a tape-worm. Mr. Sydney Jones, *19th of May*, 1863.

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19. *Foreign body removed from palm of hand.*

M. M., of Portsmouth, came under my care on the 11th of May, 1863, with a small sinus in the ball of his right thumb, which caused him much annoyance by the discharge constantly occurring from it as well as by the attacks of inflammation to which it was occasionally subject.

He complained also of pain along those branches of the median going to the thumb and forefinger, and of the tendency which existed to contraction to the first interosseous space.

He stated that ten months previously, whilst running violently, with a walking-stick in his hand, he fell and received a wound in the ball of his right thumb. His stick was broken during his fall. In a fortnight his wound was healed, and remained so for about four months; during this time, however, he felt what he described as a "hard core."

At the end of these four months an abscess formed, which after a while burst, and subsequently healed, to be followed, however, by frequent recurrence of such processes.

The sinus, about three-quarters of an inch in depth, was examined by means of a probe, and something hard was detected; by firm pressure on this, no pain was caused as might have been expected from similar

treatment of an indurated cicatrix; and, besides, some tilting was traceable of the opposite end of the induration; so that a diagnosis was given that some foreign body, probably a piece of his walking-stick, remained embedded in his palm.

An incision was recommended, and submitted to; and, after a little manipulation, a piece of wood, about an inch in length, and three lines in greatest width, was extracted; this the patient immediately recognized, by the bore it had in order to serve the purpose of a cigar-holder, as part of his stick; it had been embedded for ten months deeply amongst the small muscles of his thumb, in contact with branches of the median nerve.

The wound healed in about a fortnight; the healing being purposely retarded in order to secure a sound cicatrix.

Mr. Sydney Jones, *19th of May*, 1863.

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20. *Syme's amputation of the ankle; stump walked upon for two years; dissection after the lapse of eleven years.*

T. C., at the age of seven, was brought into the London Hospital, the 15th of April, 1862, in consequence of the forepart of his right foot having been crushed by the wheel of a dray passing over it. Mr. Curling at once amputated the foot at the ankle-joint, and removed the malleoli. The part healed favourably, and a shoe made by Gray, of Cork Street, was afterwards worn. For two years the boy was able to walk and jump as well almost as before the accident. The head of the tibia and knee-joint then became diseased, and contraction took place, so that he was no longer able to bear on the stump. About a year and a-half ago an attempt was made to straighten the limb by forcible extension. This was followed by suppuration in the thigh, when all extension was discontinued. In May, 1863, at the age of 18, he applied to Mr. Curling to amputate the limb. The leg was acutely flexed on the thigh, and admitted of no extension. There were sinuses leading to diseased bone at the head of the tibia. He has reddish hair, and is of strumous appearance. There is shortening of the index-finger, and a large cicatrix resulting from necrosis and removal of the metacarpal bone. On the 7th of May, Mr. Curling amputated the thigh by Teale's method, which was most convenient, in consequence of the flexed condition of the limb. I am indebted to Mr. Curling for the above notes.

Dissection.—The knee admits of very little extension, and flexion is maintained by the hamstring muscles, together with the condensed and

shrunken tissues with which their tendons are matted in the popliteal space. The lateral gliding of the tibia on the femur is more than in health. It is unaccompanied by grating, although much rough and denuded bone is felt within the joint when a probe enters it by any of the sinuses. Thus, when introduced by either of two sinuses whose orifices on the front of the leg are three inches below the head of the tibia at the outer side, a probe encounters rough open cancelli within the head of the tibia, in which there is a large cavity moistened with pus. In some places the bone crumbles too easily under the impact of the probe. Carried further, the instrument enters the joint and again encounters a carious surface on the patella, which, however, is not anchylosed. A third sinus, at the upper limit of the ham space, conducts to rough bone on the back of the outer condyle of the femur.

The skin is natural over the knee, and is nowhere glued to the subjacent bone. The muscles of the thigh and leg are much atrophied, and the condyles of the tibia and femur are thus by comparison, although not actually, enlarged. On the other hand, these bony prominences maintain their natural external form. The head of the tibia still touches the back of the condyles, and although the leg is flexed so that the heel all but touched the buttock, its axis preserves its right relation to that of the femur.

A vertical section is made through the joint in the mesial line from before, backward. In the vicinity of the line of section the articular surfaces of the patella, femur, and tibia are loosely connected by watery areolar tissue, which resolves itself under the microscope into exceedingly fine single filaments, interlacing irregularly with wide meshes; nowhere are wavy fibrillated bands of normal fibrous tissue visible. There is, however, an abundant intermixture of fat. On destroying these loose adhesions in the outer half of the dissection, the outer femoral condyle is found without cartilage, except in the middle, where a circular island of cartilage, an inch in diameter, remains, and shelves off behind into rough open cancelli, and in front to an articular surface whose cartilage is replaced by gelatinous, soft, and very vascular granulations, and by the watery areolar tissue just mentioned. Through these the knife-point is easily sunk into the open subjacent cancelli. The articular surface of the patella retains only a central islet of cartilage in apposition with that on the outer femoral condyle. Its edge is thinned, and around it the articular surface is carious, or is covered by soft vascular granulations.

The outer part of the head of the tibia is excavated; its cancelli are bathed in pus. This portion of the joint contains no vestige of healthy

synovial membrane. Neither in the inner half of the joint, with an exception to be mentioned, is any free and healthy synovial surface present, although it is less disorganized than the opposite half. A small piece of cartilage on the patella has a smooth and glistening and free surface, but elsewhere the synovial surfaces are adherent, and converted either into loose watery filamentous tissue, or into tissue more condensed and very vascular. Cartilage still covers most of the inner condyle of the femur and of the corresponding surface of the head of the tibia; but these surfaces are only exposed by breaking down the close fibrous adhesions by which the synovial membrane is replaced. The edges of both cartilages are thinned, and the bone invested by soft granulations bathed in pus. The semi-lunar cartilages have disappeared, but crucial ligaments are still traced, although much altered. It is difficult to ascertain how far the cancelli of the tibia are infiltrated with pus, seeing that the saw must have carried that fluid beyond the diseased tissues.

The section is now continued vertically through the tibia and through the stump at the ankle in a direction from before backwards, and a little outward. The bellies of the gastrocnemius and soleus are wholly converted into fat. The lesser muscles of the leg are less fatty, and contain here and there pale tawny muscular fasciculi. The Achilles tendon is much thinner than is usual at the age of eighteen. Traced into the stump, it ends in a patella-like disc of bone which, fixed below, glides freely by means of a bursal surface against the blunt and rounded posterior edge of the lower end of the tibia and fibula. This bone has the following dimensions:—

Length	$1\frac{3}{4}$ inches.
Breadth	$\frac{1}{4}$ of an inch.
Thickness at the centre . . .	$\frac{1}{2}$ an inch.

It is composed of cancellous bone bounded by a very thin laminar surface. Its long axis is horizontal, its back strongly convex; its anterior surface concave both in the horizontal and vertical directions—the latter curve being the stronger. It thus accurately fits against the edge of the tibia on which it plays. The fibres of the Achilles tendon spread out a little as they approach this bone, and then invest it on all sides, becoming incorporated with its periosteum. From the lateral and from the lower edges of the bone there is continued a membraniform ligament which, together with some thinner fibrous bands coming from its upper border, where the tendo achillis joins it, loosely unites this sesamoid bone, after the manner of a capsular ligament, to the extremities of the tibia and fibula. The fibres of the lower edge are thickest and

most numerous of any, and although much less bulky than the tendo achillis, are formed by the reunion of its fibres after they have spread and enclosed the bone; they run forward to spread themselves over the anterior third of the lower surface of the end of the tibia. The lateral fibres run to either edge of this surface, and the thin bands from the upper edge of the sesamoid bone terminate upon the back of the tibia immediately above the posterior rounded edge of its lower extremity. The interior of this capsular ligament as well as the bone surfaces which it encloses are smooth like the interior of a bursa, but are not lined with epithelium. The lower fibres constitute the ultimate insertion of the tendo achillis just as the patellar ligament gives insertion to the rectus femoris, and the osseous disc has much resemblance to a sesamoid bone developed within the substance of the tendo achillis. Whatever may have been its function during life, its formation is due to an accident. Most probably it originated in a portion of periosteum dissected with the tendo achillis from the tuberosity of the calcaneum in the course of the operation upon the ankle-joint in 1852. The thick skin and granular fat investing the stump are identical with those of the natural heel.

The length of the tibia, measured from the interarticular spine to the centre of the lower extremity, is thirteen one-eighth inches. That of an adult tibia (with furrows marking recent adhesion of the epiphyses, and probably belonging to a female) between the same points is fourteen inches. That of an old male tibia (well-marked in all respects), is fifteen and a-half inches between the same points.

Mr. John Couper, *19th of May*, 1863.

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21. *Case of lardaceous disease of liver, spleen, kidneys, stomach, intestines, and supra-renal capsules without bronzing of skin.*

J. W., æt. 13, had, seven years previously, suffered from carious disease of the hip-joint, for which excision of the head of the femur was performed, either in 1857 or 1858, by Mr. Erichsen. (The early records of this case cannot be found.) Sinuses having again formed at the seat of the original disease, Mr. Erichsen removed, in May, 1863, some carious bone from the acetabulum of the left thigh. The patient gradually sunk, and died seven days after the operation.

Post-mortem examination.—The great trochanter had grown smooth, but was not covered with cartilage; there was perfectly free movement in the joint, but the bone had again become carious in the acetabulum. The capsule was imperfect at two spots, one anterior and the other posterior.

The liver was rather small (the memoranda of all the weights of the organs have unfortunately been lost) but presented, as also did the spleen, an exquisite example of the lardaceous disease. It gave a dark reddish-brown colour, with a weak watery solution of iodine, which did not become blue with sulphuric acid. The seat of the change in the liver, as shown by this reaction and by the microscopic appearances, was in the centre of the acini. In the spleen the Malpighian bodies were the parts principally affected, but in it this reaction extended into the pulp.

On brushing over the stomach with the weak iodine solution, numerous dark red-brown streaks and patches appeared; these were most marked in the pyloric portion. Under the microscope the change was seen in a most exquisite manner to have affected the middle coats of the arteries; but many of the flaccid tubes were affected by the same change of their contents. In the intestines the change was most marked in the jejunum and ileum. The interior of the villi were the portions most affected, but the precise seat of the change could not be so clearly made out as in the stomach. A few of the mesenteric glands exhibited the iodine reaction, but in a less marked degree. In many of these the cortical substance had undergone a fatty degeneration, but no recent tubercle was found in them, nor in the intestines, nor were any ulcerations present in the latter. Neither in the stomach, nor in the intestines, nor in the mesentric glands did the colour produced by the iodine change on the addition of sulphuric acid.

The lungs presented many spots of crude tubercle and numerous indurated patches, especially at the apices, where in spots varying from the size of a hazel-nut to that of a walnut, the tissue was of cartilaginous firmness, and deeply pigmented. Several of the bronchial glands were converted into masses of cheesy-matter, but neither the lungs nor bronchial glands showed any appearance of lardaceous change, nor presented any of the reactions with iodine, found in other parts.

The kidneys were not enlarged; in both the capsule separated easily. Both the external portions and the surface of sections presented a very peculiar mottling, which was especially evident in the cortical substance; here in parts the tissues had undergone the lardaceous change, presenting the appearances characteristic of that state, being firm, translucent, and glistening. This condition was especially evident in the Malpighian bodies; but mottling the substance, and occupying a greater extent of tissue than the lardaceous change, was a homogeneous, opaque, yellowish deposit, which gave the kidney the appearance of having un-

dergone fatty degeneration in a great extent of its tissue. These parts were, however, very firm, resistant to pressure, and on examination under the microscope it was found that this opaque material, which appeared infiltrated equally in the tubes and interstitial tissue of the cortical substance, was entirely dissolved and rendered transparent both by weak acetic acid, by glycerine, and by weak alkaline solutions, thus being apparently of an albuminous nature. The tubes so affected showed, after the addition of acids, very little change in their epithelium, which was certainly not fatty. These portions of the kidney gave no brown colour on the addition of iodine, and presented neither to the naked eye nor on microscopic examination any of the appearances of having undergone the lardaceous change, which change affected powerfully the cortical substance. The reaction with iodine was most evident in the capillaries and small arteries between the tubes and in the Malpighian bodies, but was evident also within a few of the cones. No change to violet ensued on the addition of sulphuric acid. The appearances in both kidneys were precisely similar.

Both supra-renal bodies were slightly enlarged. Their texture was excessively firm and resistant. Their surfaces were mottled with yellow spots which were very thickly scattered, so as almost to give them an uniformly yellow appearance. On section, the appearances characteristic of lardaceous degeneration were very perfectly seen.

On microscopic examination both the natural texture of the medullary and cortical substances was almost entirely converted into translucent glistening masses. No traces of the compound cells, or of cells of the cortical substance, could be detected, and in the outer layer of the cortical substance the tissue was almost entirely replaced by a fatty and granular debris, on which acids or alkalies had almost no effect.

The reaction with iodine was not so extensive, however, as the appearances had led to expect, but it was exquisitely marked in the vessels ramifying around the masses of cells in the cortical substance, giving the tissue the appearance of having been minutely injected. In many places the addition of sulphuric acid produced after about half-an-hour a most distinct dark indigo-blue, approaching a violet's. This change in colour was not, however, universal throughout all parts of the same section; in some places the arteries between the columnar masses of cells retained the dark red-brown colour first caused by the addition of the iodine, while in others the indigo-blue produced by the addition of sulphuric acid was very apparent.

The skin of this boy was unusually white, and perfectly free from any

discoloration whatever. The hair was light brown, the eyes light grey. There was an extensive scrofulous ulceration of the septum of the nose. The body looked very imperfectly developed, resembling more that of a boy of eight than thirteen, and one testicle had remained in the inguinal canal. Dr. Wilson Fox, *19th of May*, 1863.

XI.—SPECIMENS FROM THE LOWER ANIMALS.

1. *A splenic tumour, weighing fifteen pounds, removed from a live dog.*

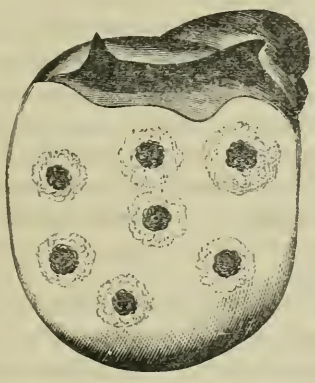
A drawing of the tumour the size of life was exhibited in consequence of the suggestion made by Mr. Spencer Wells, at a previous meeting, of removing enlarged spleens from the human subject. The animal, from which the tumour was removed by myself in 1850, was a cross between a mastiff and Newfoundland dog, and of the ordinary size of the latter. It was five years old, enjoyed good health, but was ravenous. It had eaten a quantity of carrion during the summer of 1849, to which the owner, Mr. William M'Bean, attributed its present disease. The abdomen was enormously and unequally distended, the left side projecting more than the right; the enlargement had much increased within the two last months. It felt quite solid, immoveable, firmly attached posteriorly; the integuments glided over it, and pressure on percussion produced uneasiness. The dog looked well, with clear eyes, although greatly emaciated. A tumour was diagnosed between the intestines and anterior parietes of the belly.

On the 16th of March, 1850, in the presence of a large number of the profession in the City of Montreal, I proceeded to removal. Anæsthesia was produced by means of sulphuric ether, the snout being tied beforehand to prevent biting, and in six minutes the dog was insensible. An incision was made an inch below the ensiform cartilage along the mesial line, down to four inches of the symphysis pubis. The deep structures were then cut through, exposing a great number of vessels which at first resembled worms in a sac through the peritoneum. These escaped through the wound. The tumour appeared to fill the abdomen, and was found to involve the spleen, lying above and in front of the bowels, as had been diagnosed. It was turned out with the hand. The splenic artery was tied, and about fifteen smaller vessels, and the tumour was readily detached without any difficulty. The edges of the wound

were brought together by transverse sutures, and the abdomen was firmly bandaged. Altogether, not five ounces of blood were lost, and the pulse continued good to the last, when it became accelerated.

The tumour weighed fifteen pounds, and very much resembled a dropsical ovarium; it was firm and elastic, of a dark-bluish colour in many places, and appeared highly vascular; a section showed it similar to a spleen engorged with blood, and filled with dark coagula. This organ was divided into two lobes, one of which was free, whilst the other was embedded on the surface of the tumour, with an elevated ridge (*see* Woodcut). Numerous large and tortuous vessels entered the substance of the tumour near the spleen.

Woodcut 40.



The dog lived five days, and died from cold and probable neglect, and might have recovered if reasonable attention had been bestowed upon it, for almost the entire wound had healed by adhesion. The tumour probably originated in a kick on the spleen, producing rupture and extravasation of blood within its capsule, which subsequently became organized. The true structure of the gland itself, where embedded, was quite normal.

The removal of the tumour was so comparatively easy, that it affords good ground for believing that a similar proceeding might be accomplished with success in the human subject. It is the first case on record where a diseased spleen has been taken out of a living animal, although the healthy organ has been frequently removed with success by Dr. Crisp and others from dogs.

Dr. Gibb, *16th of December*, 1862.

2. *A nodulated, long concretion from the stofle-joint (knee) of a horse.*

It weighed three hundred and eighteen grains, measured two inches and a-half in length, and two inches and a-half in breadth. The animal, when six months of age, was injured by slipping down when playing with another colt, and it was lame from this period, but it continued to do slow agricultural work for six or seven years, when it was killed. The concretion was found in the cavity of the joint. Dr. Crisp thought it probable that a portion of cartilage was partly detached by the injury; that ossific matter was gradually deposited; the substance afterwards becoming free. Dr. Crisp, 20*th of January*, 1863.

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3. *The crop of a turkey enormously distended from an accumulation of dry, tough grass, which the bird was unable to get rid of.*

The contents of the crop weighed twenty ounces, and the cavity held fifty ounces of fluid. The bird was much emaciated; in other respects all the organs of the body were in a normal condition. Dr. Crisp thought that the contents of the crop might have readily been removed by incision during life, and related an instance where he had performed this operation successfully. Dr. Crisp, 20*th of January*, 1863.

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4. *The tuberculated spleens of two pigs.*

The tubercles varied in size from that of a hazel-nut to that of a walnut. The lungs and liver were also diseased, but the animals notwithstanding were in tolerable condition, and were killed for food. The tubercular matter formed the greater part of the bulk of the spleen. The person who slaughtered the pigs, and who had killed many hundred pigs during eighteen years, had only met with three similar instances.

Dr. Crisp, 20*th of January*, 1863.

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5. *Fungoid disease from the orbit of a sheep.*

The tumour weighed about two ounces and projected about two inches from the orbit. It had much the appearance of the same lesion in the human subject. The disease was of rapid growth, and commenced four months before the animal was killed.

Dr. Crisp, 20*th of January*, 1863.

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6. *A large oblong bronchial gland of an ox, situated at the bifurcation of the trachea.*

It weighed seventeen ounces, and so pressed upon the air-tube as to occasion approaching suffocation. This was always relieved by introducing a hollow probang into the stomach, and evacuating the gas.

Dr. Crisp, 20*th of January*, 1863.

7. *Cysts from the abdomens of hogs.*

A large cyst (*echinococcus*) from the abdomen of a wart-hog (*P. Allain*) which held five pints of fluid, and was in a state of chalky degeneration. Also three small echinococci from the stomach of the Taxia masked hog (*sus pliciceps*). Dr. Crisp said that he had found these parasites in all the foreign hogs that he had examined, including the other species of wart-hog (*P. Œthiopicus*) the red hog (*P. pemcillatus*), and the African and European wild hogs.

Dr. Crisp, 20*th of January*, 1863.

8. *Pericarditis in a young emu.*

The pericardium was covered with recently formed lymph.

Dr. Crisp, 20*th of January*, 1863.

9. *The gad of a Stanly crane* (*A. paradisia*).

In which the hard semi-cartilaginous tubercles formed nineteen-twentieths of the bulk of the organ. Dr. Crisp thought that one form of tubercle in some quadrupeds and birds was of parasitic origin.

Dr. Crisp, 20*th of January*, 1863.

10. *Two young Italian greyhounds suffering from rickets.*

The mother is eight years old, and the father is two years old. There were eight pups in the litter, four of which remained with the mother, and were perfectly healthy, and four were removed after the lapse of twenty-five days.

Two of the latter became sickly, but got well by being fed on boiled meat, and bread-and-milk. The two which were presented to the Society, were fed upon meat, bread, and broth, but animal food formed the

largest proportion. After being thus fed for three weeks, they began to exhibit a difficulty in walking, particularly on their hind legs. A little afterwards, the articulations became swollen, and the forelegs began to bend. Their eyes ran, but their appetite remained good. At one time their whole body was so painful that they could not bear to be touched. They now present those symptoms of rickets which are observed in the human subject. They are bow-legged, have swollen articulations, and large stomachs. I had a correspondence with Professor Spooner of the Royal Veterinary College, and he informs me that he never observed rickets in the lower animals, but Mr. G. Varnell had observed a similar disease to rickets in grown-up horses, and Dr. Harley, of University College, brought specimens of their bones before the Pathological Society. I consider these specimens conclusively demonstrate that rickets is not identical with scrofula, and does not owe its origin to hereditary syphilis, as is sometimes believed, but I think that it is induced by improper or insufficient food.

I have generally remarked that bad milk, either from the mother's breast, or given by hand in early life, has produced rickets, and I have also observed that animal food improperly administered in early childhood is attended with the same result. For that reason we find rickets not only amongst the poor, but also in the better classes.*

Dr. Dick, *7th of April*, 1863.

* About three months after the above was written, the dogs completely recovered under the administration of cod-liver oil, with a bread-and-milk diet. Only their forelegs remain slightly bent.

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